Diplomarbeit

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"The QD-Index" -

An Experimental Meta-Concept to Assess and Rank Countries
According to their Quality of Democracy

Verfasser

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Abstract

Index combination constitutes the most recent development within the scientific field of democratic quality assessment. In the course of this study, a genuine experimental meta-index, notably the QD-Index, is theoretically conceptualized as well as practically operationalized. Concretely, the Worldwide Governance Indicators, Freedom House and Vanhanen's Index of Democratization are combined for the year 2006. In general, the QDI enables a more reliable and more valid assessment of democratic quality on a global scale, because it combines the constituent indices' respective strengths. The QDI results are, however, also biased to some extent, which is due to the methodological particularities of the processed indices.

Key words: concept validation, Freedom House, index combination, QD-Index (QDI), quality of democracy, Vanhanen's Index of Democratization, Worldwide Governance Indicators

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List of Abbreviations

BTI	Bertelsmann Transformation Index
C	Competition
CL	Civil Liberties
DoR	Date of Retrieval
FH	Freedom House
GDP	Gross Domestic Product
HDI	Human Development Index
ID	Vanhanen's Index of Democratization
IMF	International Monetary Fund
ODA	Official Development Assistance
P	Participation
PPP	Purchasing Power Parity
PR	Political Rights
PRIO	International Peace Research Institute, Oslo
QDI	Quality of Democracy – Index; QD-Index
RoL	Rule of Law
WDI	World Development Indicators
WGI	Worldwide Governance Indicators

1 Introduction

This chapter introduces to the topic of the present diploma thesis, notably the assessment of democratic quality. Subsequently, a short review of the state of research of the empirical study of democracy will be provided. In a third step, the central research question will be deducted from the thesis' focus of research. For the purpose of enhancing transparency, this chapter also entails information concerning the methodology applied. The final part constitutes a comprehensive overview of the diploma thesis' structure.

1.1 Topic of the Diploma Thesis

"Democracy" is undoubtedly one of the most contested concepts in modern political science. This development has accelerated enormously since the end of the Cold War and the emergence of the "Third Wave of Democracies"[1]. The number of countries classified as "democracies" has increased significantly over the past decades, which is schematically illustrated in figure 1 (Lauth et al. 2000b, 7). Especially, African and Latin American countries have been focused on by democracy research efforts (O'Donnell 1999; O'Donnell 2004b; Bogaards 2007). Unsurprisingly, sub disciplines within comparative political science, such as the empirical study of democracy, have flourished and now represent a diverse and dynamic field of research.

As illustrated in figure 2, the empirical study of democracy can be classified roughly into three different streams of research, which of course interrelate to some degree (Kaiser/Seils 2005, 133; Munck 2006, 129). The most prominent sub discipline may be labeled as "transition research", which deals with the transitional developments and implications of countries moving from totalitarian and authoritarian to democratic political systems (Carothers 2007a; Krastev 2006; Fukuyama 2004; Berman 2007; Mansfield/Snyder 2007). Transitional research predominantly emphasizes the determining role of elections as a minimum criterion for regime differentiation (Munck 2006, 130; Schmidt 2000, 393).

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[1] Concerning the global expansion of democracy, three „waves of democratization" are distinguished within scientific research: The first wave comprises OECD countries in the aftermath of the 2nd World War. The second wave represents countries of the decolonization era in the second half of the 20th century. Finally, the third wave comprises countries, which have transformed into democracies after the Cold War. (Keman 2002b, 42)
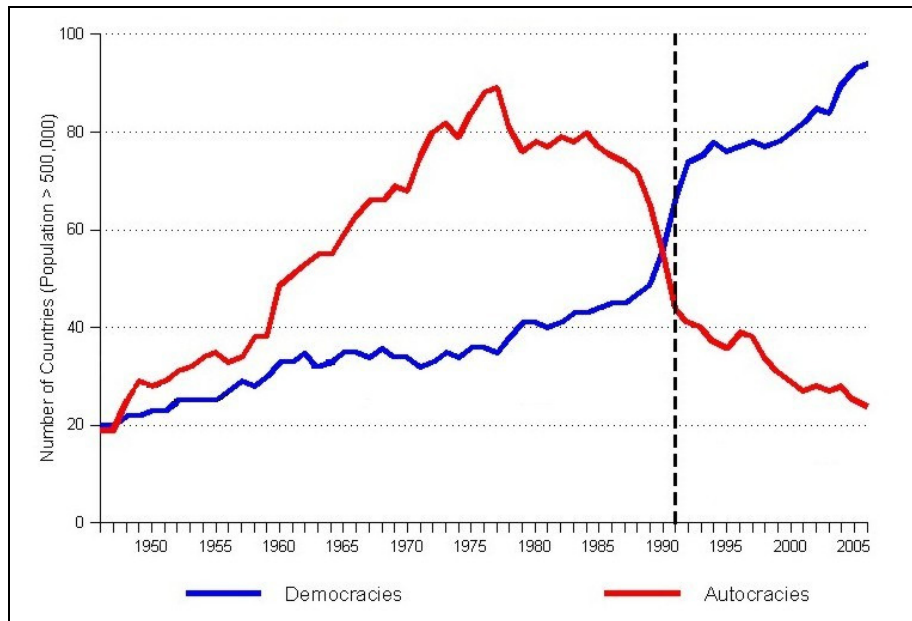
Fig. 1: Global Regimes by Type, 1946-2006
(Source: Polity 2008, slightly adapted)

The second sub discipline, "consolidation research", focuses on the factors, conditions, and circumstances of consolidating new democracies. Sometimes this consolidation research is also referred to as the research in "democratic stability". In this sense, consolidation is the continuation of democratic transition (Munck 2006, 143). As compared with transition studies, consolidation research is much more difficult to conceptualize due to the lacking of a clear-cut indicator for consolidation (Munck 2006, 142).

Finally, the third and youngest sub discipline, "quality of democracy research", explores the principles, dimensions and related components that define democratic quality of political systems. Similar to the research in democratic consolidation, no single, clear-cut indicator can be derived to identify the democratic quality of a country (Munck 2006, 146). Hence, research in democratic quality represents the final stage in the continuum of the empirical study of democracy, whose foci of research range from transition to stability and consolidation to the quality of democratic regimes (Munck 2006, 146). It is this third sub discipline that will be focused on within the deliberations of the present diploma thesis.
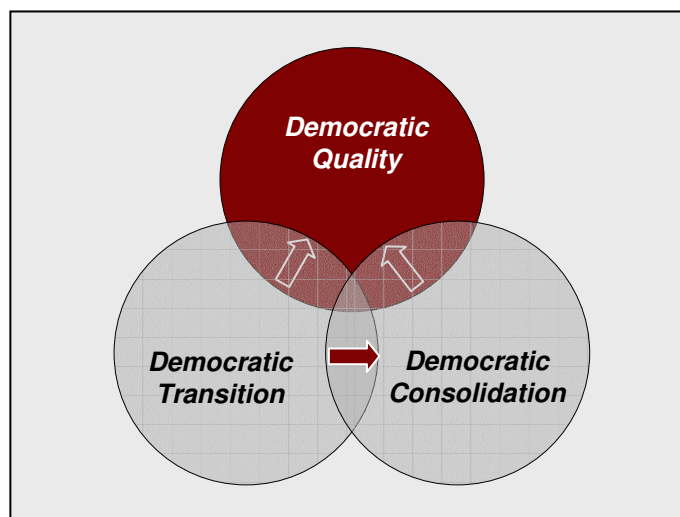
Fig. 2: Subtypes of the Empirical Study of Democracy

(Source: Own illustration)

1.2 Review of the State of Research

As has already been outlined above, measuring democratic quality of countries and political regimes is a comparatively young discipline within democracy research (Lauth 2006, 92; Pickel 2006, 111). Since the late 1960s political scientists began to concentrate on measuring democratic regimes (Pickel/Müller 2006, 135). Especially Robert Dahl (1971; 1998) and his concept of "polyarchy" gave direction to the development of measuring democratic quality as a separate field of research over the past three decades (Kaiser/Seils 2005, 133). Dahl's "polyarchy" concept focuses on procedural and institutional aspects and omits output-oriented elements of democracy (Schmidt 2000, 394-5).

His concept is neutral in terms of different democracy subtypes, such as presidential vs. parliamentary democracies, etc. (Schmidt 2000, 395). Although Dahl acknowledges that certain levels of socio-economic and politico-cultural conditions must be met for the development of democracy, he avoids a comprehensive democracy definition and focuses on political democracy instead (Schmidt 2000, 397). This approach has been decisive for many democracy conceptualizations of the subsequent study of democracy.[2]

After the debate on methodological issues had been increasing during the 1970s and 1980s, scientific efforts focused on measuring democratic quality on a comparative basis, internationally as well as historically (Lauth et al. 2000b, 11; Schmidt 2000, 397).

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[2]   See for example Vanhanen (1997; 2000; 2003)

In this context, democracy evaluation must always be seen against the backdrop of advances in political theory as well as real political developments, such as modernization theory and the era of decolonization during the second half of the 20th century, respectively (Lauth et al. 2000b, 11). Over the last decades an increasing variety of quantitative and quantifying democracy indices[3] has emerged, including Freedom House, Vanhanen's ID, Polity, Bertelsmann Transformation Index (BTI), etc. (Lauth et al. 2000b, 11).

Apart from these, qualitative approaches have been developed, as well, such as the democratic audit. The bottom line of this approach is that there are many elements of democracy, which can only be assessed properly by qualitative means (Beetham 1994a; Beetham 1994b; Weir/Beetham 1999). Besides, democratic audits acknowledge the fact that assessing the quality of democracy is an extremely complex issue (Beetham 1994b, 25). Especially Weir/Beetham (1999; 2000) have promoted the approach of a country's democracy assessment that is conducted by its citizens themselves (Beetham/Weir 2000, 75). Thereby, a democratic audit represents an open, multi-criteria concept, which avoids data aggregation, weighting of certain democracy dimensions, setting minimum thresholds, or benchmarking against other democracies (Beetham/Weir 2000, 75-6; Dunleavy/Margetts 1994, 155; Beetham 1994b, 34).[4]

Democratic audits omit the aggregation of data due to the potential bias that structurally different countries may be classified at the same level of democracy. Due to this uniqueness and specificity of democratic audits, no comparative country rankings can be generated (Beetham/Weir 2000, 76).[5] Democratic audits rather emphasize the educational effects, the initiation of internal political debate, the context specificity of democracy, as well as the complex interrelationships of democracy dimensions within a specific country (Beetham/Weir 2000, 87; Beetham 1994b, 31).

As the emergence of diverse concepts and approaches underlines, the measurement of the quality of democracy has developed from a pure dichotomous classification of regimes to a more differentiated assessment (Abromeit 2004, 73-4; Schmidt 2000,

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3   Quantitative (objective) indices: "hard facts", statistical data, etc.
    Quantifying (quasi-objective) indices: quantified, subjective expert judgments
    Qualitative (subjective) indices: "soft facts", subjective evaluations without quantifications, (Pickel 2000, 245-6)
4   See 2.3 Problems of Conceptualization and Operationalization, 16
5   "This is the simple but ambitious project of assessing the state of democracy in a single country." (Beetham 1994b, 25)

390).[6] Within modern empirical democracy research, democratic quality no longer represents an all-or-nothing question, but rather a question of degree (Almond et al. 2004, 27). Modern democracy indices, therefore, are based on polytomous conceptualizations (Pickel/Müller 2006, 136).

Against the backdrop of the ever increasing number of democracy indices, most recent research efforts focus on evaluating their concept quality, as there is still a research gap regarding the adequate operationalization of theoretical democracy concepts (Lauth 2004, 22; Aarebrot/Bakka 2006, 70). Especially Munck/Verkuilen (2002) and Müller/Pickel (2007) have systematically analyzed the concept quality of the most prominent indices.[7] Based on these deliberations, there has been some scientific effort to combine already existing indices or rankings in order to build a meta-concept for assessing democratic quality (Lauth 2006; Campbell/Sükösd 2002).[8] This approach aims at generating more valid and more reliable measurement results by combining the strengths while simultaneously eliminating or reducing the weaknesses of the respective indices.

1.3 Thesis' Focus of Research

As the review of the state of research within the field of assessing democratic quality has shown, the number of democracy indices has increased significantly over the past three decades. Only recently, there has been scientific effort to combine already existing democracy indices to form meta-concepts, which aim at delivering higher concept quality, validity, and reliability.

It is exactly this comparatively youngest stream of research within the empirical study of democracy that will represent the core of the present diploma thesis. Concretely, it will constitute a proposal to look differently at already existing democracy indices from a conceptual point of view by presenting an experimental index combination, i.e. a meta-concept to assess and rank countries according to their quality of democracy.

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[6] See 2.2 The Need for Assessing the Quality of Democracy, 14
[7] See 2.4 Assessing the Concept Quality of Democracy Indices, 26
[8] Lauth (2006) develops a meta-index by combining WGI, Polity and FH. By contrast, the approach of Campbell/Sükösd (2002) constitutes a model to measure the global progress of democracy on a biannual basis to compare countries' positional changes over the years. Campbell/Sükösd include in their model not only the political, but also other dimensions, such as gender, economy, knowledge, health, and environment.

In order to delimit the focus of research in a transparent manner, it is important to name the scientific areas which will not be dealt with in the course of this study. The model, which will be developed, predominantly focuses on the political dimension of democracy, therefore, pursuing a narrow rather than a comprehensive/maximalist approach.[9]

In addition, a discussion of necessary social, economic, and political preconditions for democracy in the sense of modernization theory, as well as a discussion of democratic regimes' performance in terms of political output or regime effectiveness will be neglected. Of course, low effectiveness concerning beneficial policy outcomes may well undermine citizens' confidence in politics and the legitimacy of a democratic regime (Roller 2005, 268). Performance as an element of quality of democracy, however, will be excluded due to the fact that non-democratic regime types may generate good economic results, as well (Roller 2005, 268). In addition, there may be trade-offs and conflicting interests concerning special policy issues, which makes political performance difficult to be operationalized in the frame of democracy assessment (Roller 2005, 269).[10]

Apart from this, the research project will focus on the national state-level, thus deliberatively neglecting the assessment of quality of democracy on a supranational level as well as on a sub-national, regional level.[11] Due to the attempt of generating a meta-conceptual comparative country ranking, qualitative approaches, such as the democratic audit, will equally be omitted. Democratic audits cannot and will not be incorporated into the present model for a number of reasons, including the lack of quantifiable scores, the concentration on single countries, their inherent non-comparability, their non-replicability, as well as their low inter-subjective verifiability (Kaiser/Seils 2005, 139-40; Munck 2006, 140).

1.4 Deduction of the Research Question

Derived from the analysis above as well as from the review of the state of research, the following central research question for the present diploma thesis can be deducted:

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[9] See 2.3.1 Minimalist vs. Maximalist Democracy Concepts, 17
[10] See 3.2.3 Responsiveness, 36
[11] For an attempt to evaluate the quality of democracy on a supranational level, e.g. the European Union, see Lord (2004).

>*To what extent can an experimental meta-concept, such as the QDI, generate added value in terms of concept quality by combining already existing democracy indices for the purpose of assessing democratic quality on a global scale?*

Based on this general central research question, numerous sub questions can be derived:

- What are potential and useful dimensions and indicators for the QDI?
- Which democracy indices can (cannot) be used for the conceptualization of the QDI?
- According to the QDI, what does an exemplary country ranking for a specific year (e.g. 2006) look like?
- What are differences and commonalities of the results generated by the QDI in comparison to its constituent democracy indices as well as external reference values?
- What are strengths and weaknesses of the QDI?
- Is it meaningful and feasible to combine conceptually and methodologically different democracy indices in the first place?
- What about the QDI's own concept quality in terms of its theoretical conceptualization and practical operationalization?

1.5 Methodology

Comparing is an integral method within political science (Lauth/Winkler 2002, 41).[12] It aims at reducing the complexity of reality by systematically structuring empirical phenomena (Lauth/Winkler 2002, 43). In principle, there are three different types of comparisons; descriptions, classifications, and comparative analyses (Lauth/Winkler 2002, 44; Aarebrot/Bakka 2006, 59). *Descriptions* analyze one case and all its relevant variables, whereas *classifications* operate vice versa, as they compare one variable for several cases (Aarebrot/Bakka 2006, 59). Finally, c*omparative analyses* compare several variables for a number of cases (Aarebrot/Bakka 2006, 59). As these three subtypes show, comparative political research is subject to a trade-off in depth and breadth of comparing countries (Lauth et al. 2000b, 15). Consequently, the latter

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[12] "Comparison is the methodological core of the scientific study of politics." (Almond et al. 2004, 31)

subtype prevails, which means that a small amount of cases is compared on the basis of a predefined set of variables (Aarebrot/Bakka 2006, 60).

In this connection, the usefulness of the underlying theoretical concept is of vital importance. Either the analysis concentrates on a small number of cases by applying a complex concept, or many cases are researched via a simple concept (Aarebrot/Bakka 2006, 75). In general, it seems more promising to operate with a modest concept to produce limited, but precise results, rather than to apply a comprehensive model with little added value (Aarebrot/Bakka 2006, 76).[13] In order to avoid these fallacies, the QDI will focus on a limited number of interrelated dimensions of political democracy.

Apart from the number of cases analyzed, the applied methodology in comparative political research can rest upon a primary vs. secondary analysis, constitute a cross-sectional or a longitudinal analysis, and use either qualitative or quantitative, individual or aggregate data (Lauth/Winkler 2002, 50-2). Especially, aggregate data poses some difficulties to the field of comparative political research (Niedermayer/Widmaier 2006, 85; Pickel 2000, 249). Validity problems [14], which may be due to the invalid operationalization through multiple indicators for one democracy dimension, or simply the fact of missing data [15], may cause substantial distortion of empirical results (Niedermayer/Widmaier 2006, 92).

The QDI will be set up on a cross-sectional basis for a specific year, notably 2006.[16] If the model proves valuable, longitudinal analyses may be carried out in subsequent research efforts with annually updated versions of the QDI.[17] Besides, the index will be based on already existing democracy indices, including Vanhanen's ID, Freedom House and the Worldwide Governance Indicators, and therefore will refer back to already processed secondary aggregate data. In this sense, the model uses kind of "tertiary data". The only exception will be Vanhanen's ID, which will be replicated for the year 2006, thus using secondary aggregate data. Analogously, the majority of data processed will constitute quantitative and quasi-objective data, which will be derived from quantified expert judgment ratings. The different scales will be transformed into separate scales for each democracy dimension as well as into a single overall scale.

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[13] See 2.3.1 Minimalist vs. Maximalist Democracy Concepts, 17
[14] See 2.3.3 Validity and Reliability, 18
[15] See 2.3.8 Data Availability, 24
[16] 2006 serves as the year under consideration because not all of the constituent indices have been available for 2007 in the course of composition of this diploma thesis.
[17] See 8.2 Further Research Proposals, 105

Finally, countries can also be clustered according to common characteristics and ratings, either on a geographical or on a functional basis (Campbell/Sükösd 2002, 10).[18] Clustering may enhance the understanding of commonalities and differences of countries within a cluster as well as in comparison with countries in other clusters. However, due to the assumption of the universality of human rights or the idea of democracy in general, clustering may be forgone from a theoretical point of view (Campbell/Sükösd 2002, 10). It is this last approach of omitting country clustering that will be followed in the course of the present study.

The methodological approach to answer the central research question, whether the QDI generates added value in terms of measuring democratic quality, will be twofold. Firstly, a correlation analysis with the QDI results and its constituent democracy indices as well as external reference values will be conducted. Secondly, the approach by Müller/Pickel (2007) will be applied to assess the concept quality of the QDI.[19]

1.6 Structure of the Diploma Thesis

On the basis of this introduction (*chapter one*) *chapter two* approaches die idea of evaluating democratic quality of political systems, which is graphically illustrated in figure 3. In doing so, a working definition of "democracy" is provided, which serves as the basis for the subsequent theoretical deliberations of the diploma thesis. Moreover, the scientific need for assessing the quality of democracy is highlighted. In addition, problems of conceptualization and operationalization are discussed in detail. Finally, two prominent approaches for assessing the concept quality of democracy indices are presented. One of them also constitutes the basis of critical assessment of the indices utilized for the QDI as well as the QDI itself in the subsequent chapters.

Chapter three identifies principles and dimensions that define democratic quality. In this respect, the analysis is restricted to the most relevant elements according to scientific literature. Three principles of democratic quality are dealt with, notably liberty, equality, and control. The dimensions analyzed include the rule of law, rights, responsiveness, accountability, participation, as well as competition.

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[18] Examples for functional clustering: EU members, OECD members, etc. (Campbell/Sükösd 2002, 10)
[19] See 2.4.2 Approach by Müller/Pickel (2007), 28

Chapter four deals with the theoretical conceptualization of the QDI. The three fundamental principals as well as useful democracy dimensions, analyzed in the previous chapter, are discussed in terms of the theoretical setup of the QDI.

Chapter five presents selected current democracy indices, notably the Worldwide Governance Indicators, Freedom House, as well as Vanhanen's Index of Democratization. The indices are analyzed in terms of their background and development, their dimensional focus and methodology, as well as their transferability to the QDI. Additionally, the indices are systematically evaluated regarding their respective concept quality.

Chapter six deals with the operationalization of the QDI. Firstly, the indices' processing and adaptations are discussed for the purpose of their combination. Secondly, the aggregation methodology of the QDI is presented, especially against the backdrop of transparency and replicability. Subsequently, an exemplary QDI country ranking of democratic quality is generated for 2006. Eventually, this country ranking is compared to the particular ratings of the constituent democracy indices as well as external reference values by statistical means.

Chapter seven represents a reflexive element of the thesis, as the concept quality of the QDI is assessed on the basis of the validation approach presented in chapter three. Thereby, the critical evaluation comprises the processes of conceptualization, measurement, and aggregation.

Chapter eight concludes, recapitulates the research question and clarifies whether the research goal has been accomplished satisfactorily, i.e. setting up a meta-index for democracy evaluation. This chapter also highlights the pitfalls and obstacles, which may have been occurred during the research process, especially with regard to the practicability, usefulness and operationalization of the QDI. Finally, potential further research proposals are commented on.
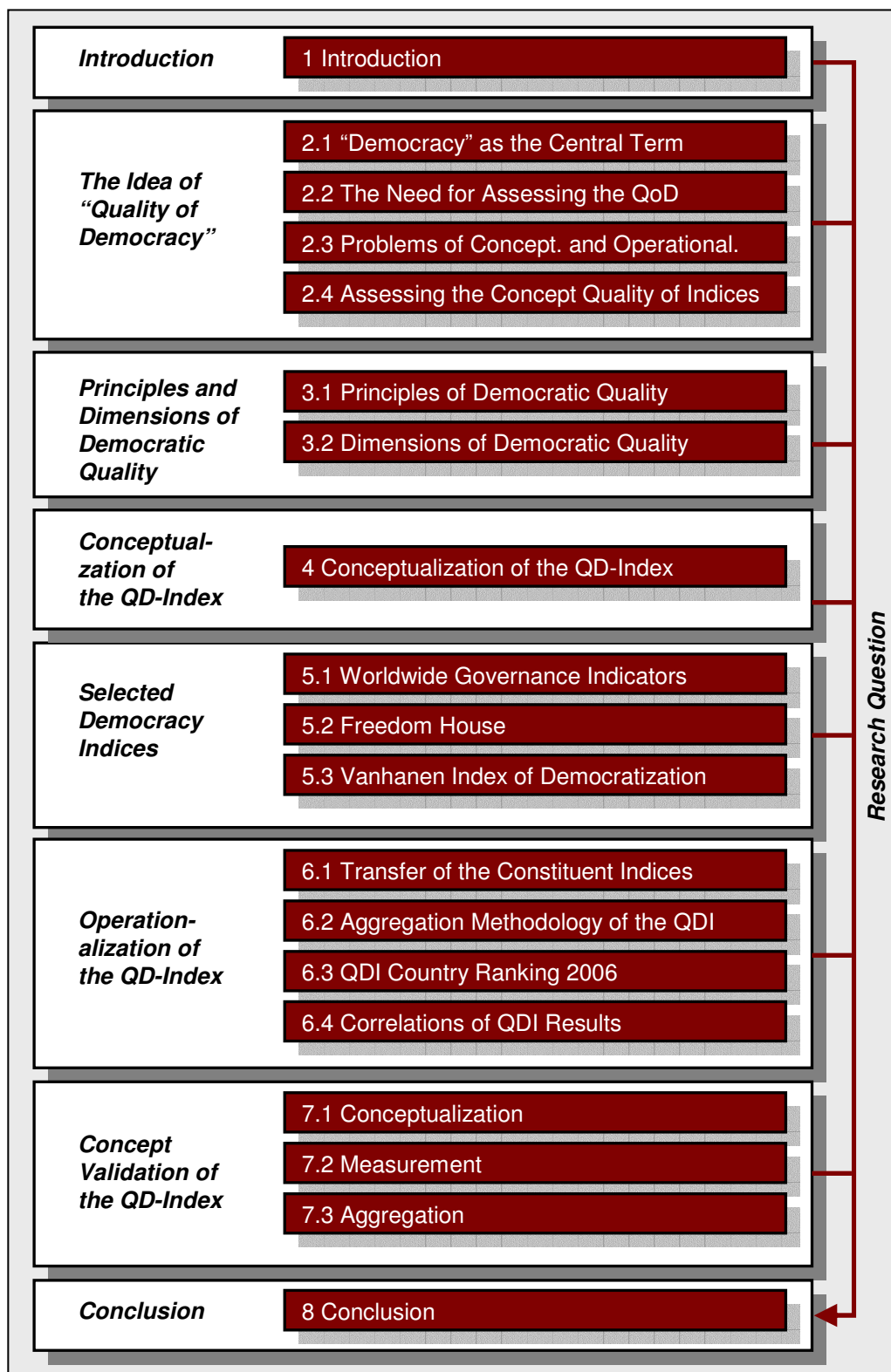
Fig. 3: Structure of the Diploma Thesis

(Source: Own illustration)

2   The Idea of "Quality of Democracy"

This chapter will derive a working definition of "democracy" in order to provide a basis for the QDI assessments of the subsequent chapters. Secondly, the need for evaluating the quality of democracy will be highlighted. Thirdly, a selection of prominent challenges within democracy measurement will be discussed in detail. Finally, there will be a presentation of two important approaches to assess the concept quality of democracy indices.

2.1   "Democracy" as the Central Term

Before measuring democracy, there is a need for proper clarification of what should be understood under the term "democracy" in the course of a research process (Lauth et al. 2000b, 12; Keman 2002b, 34; Lauth/Winkler 2002, 44; Abromeit 2004, 74). In general, there are two alternative approaches to derive a democracy conception, either the deductive-absolute or the inductive-relative approach (Müller/Pickel 2007, 512; Pickel/Müller 2006, 135). The first one refers to the empirical deduction of a democracy conception from real democratic political systems as well as to the identification of best practices in the international community (Müller/Pickel 2007, 512). The second approach, by contrast, emphasizes the need for a sound theoretical deduction of democracy conceptions and thus explicitly refuses the first alternative due to the potential danger of significant normative bias (Müller/Pickel 2007, 512; Lauth 2004, 26).

Naturally, the concept of democracy deals with social actions. In this sense, democracy always presupposes normative valuations. Consequently, it would be wrong to assume that democracy assessments can be conducted without normative implications (Traine 2000, 216).[20] However, this diploma thesis will follow the second alternative of deriving a democracy concept, notably the inductive-relative approach, in order to circumvent potential empirical fallacies (Abromeit 2004, 76-7; Saward 1994, 6). In addition, without accurate theoretical foundation, questions of validity and reliability could not be answered.[21] As a result, democracy evaluations without a theoretical basis elude the possibility of scientific falsification. Nonetheless, the normative background of the

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[20]   "Defining democracy is a political act" (Saward 1994, 7)
[21]   See 2.4 Assessing the Concept Quality of Democracy Indices, 26

research process will be revealed as transparently as possible (Lauth et al. 2000b, 13; Schiller 1999, 28).

In consideration of the mere confusion of differing, often contradicting definitions of democracy within the empirical study of democracy, the provision of a universal conception of democracy seems unrealistic. [22] However, three classifications of democracy definitions can be identified, including the constitutional, the substantive, as well as the procedural approach (Tilly 2007, 7-9). The first one focuses on the legal status of political systems and distinguishes on the basis of the constitutional setup, e.g. monarchies vs. oligarchies, etc. (Tilly 2007, 7). The second one, the substantive approach, deals with the output of political systems in terms of wealth, security, economic growth, etc. (Tilly 2007, 7; Abromeit 2004, 79) Finally, the procedural approach emphasizes governmental practices, such as elections and referendums, thus stressing the dynamic element of democracies (Tilly 2007, 8).

Substantive democracy conceptions are rather problematic in terms of operationalization for democratic quality assessments, as they predominantly focus on policy performance and neglect the control dimension of democracy (Lauth 2004, 37-8). The problem is that other, non-democratic regime types can equally deliver good economic performance results (Roller 2005, 268). Consequently, performance as an additional dimension is not apt within the frame of democratic quality evaluation (Lauth 2004, 44). The quality of democracy must not be confounded with other political aspects, such as good governance, welfare system or system stability (Lauth 2004, 29). Nonetheless, countries require minimum standards of state capacity in order to enable quality of democracy.

In consideration of the deliberations above, political democracies will be defined in the style of Almond et al. (2004)[23] and Lauth (2004)[24]:

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[22] "Clearly, providing a definition of political democracy that everyone accepts is impossible." (Bollen 1991, 5)

[23] "A democracy, briefly defined, is a political system in which citizens enjoy a number of basic civil and political rights, and in which their most important political leaders are elected in free and fair elections and accountable under a rule of law." (Almond et al. 2004, 27)

[24] „Demokratie ist eine rechtsstaatliche Herrschaftsform, die eine Selbstbestimmung für alle Staatsbürgerinnen und Staatsbürger im Sinne der Volkssouveränität ermöglicht, indem sie die maßgebliche Beteiligung von jenen an der Besetzung der politischen Entscheidungspositionen (und/oder an der Entscheidung selbst) in freien, kompetitiven und fairen Verfahren (z.B. Wahlen) und die Chancen einer kontinuierlichen Einflussnahme auf den politischen Prozess sichert und generell eine Kontrolle der politische Herrschaft garantiert." (Lauth 2004, 100)

> *Democracies are political systems, in which all citizens are entitled to elect their political representatives in free, fair, meaningful, and recurring elections and in which basic civil and political rights are guaranteed on the basis of the rule of law as well as a system of control and accountability in order to enable the proper execution of these rights.*

Apparently, democracy is a multidimensional concept (Munck 2006, 138). As a result, the measurement of democratic quality is only valid, if all of the conceptual elements are adequately operationalized.[25] The democracy definition, which forms the basis of this thesis, thus, incorporates liberal as well as procedural democratic elements, notably equality, liberty, and control (Lauth 2004, 31). However, the dualistic character of liberal democracies must be borne in mind, as the popular will is simultaneously affirmed and limited (Plattner 2004, 107).

On the one hand, the liberal principle aims at making the people sovereign in terms of determining policy decisions. On the other hand, there is a need for protecting minorities to guarantee their ability of executing their rights and liberties. Put differently, liberal democracy enables equality, participation, competition, vertical accountability, and responsiveness, which fortifies the popular will. Simultaneously, freedom rights, the rule of law, as well as horizontal accountability work to limit the power of government and thus limit the effectiveness of the aforementioned channels of popular will (Plattner 2004, 107-8).

2.2 The Need for Assessing the Quality of Democracy

The analysis of democracy has always been a core business within the frame of comparative politics (Keman 2002b, 32). The goal of democracy measurement is the provision of inter-subjectively accepted criteria to evaluate the quality of democracy of political systems on a comparative basis (Pickel/Müller 2006, 135).[26] More specifically, the goal of quantitative and quantifying democracy measurement is to work with narrow democracy concepts, while simultaneously depicting a reliable and valid picture of the democratic reality (Gaber 2000, 112).

In this context, democracy measurement has to fulfill two different tasks, regime classification, on the one hand, and the assessment of democratic quality, on the other

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[25] 6 Operationalization of the QD-Index, 78; 8.2 Further Research Proposals, 105

[26] "Die empirische Bestimmung von Demokratie ist das zentrale Ziel der Demokratiemessung." (Lauth 2006, 92)

hand (Lauth 2006, 92). Thereby, dichotomous regime classifications were sufficient during the period of the Cold War. But since the end of the bipolar world order, the need increased for measuring democracy on a more differentiated level by providing quantitative indices and methods (Abromeit 2001, 1; Welzel 2000, 135; Gaber 2000, 112). Besides, the question of how democratic democracies really are got ever more important (Schmidt 2000, 413-8; Pickel 2000, 242-3).

Moreover, the substantial amount of hybrid regimes, ranging between authoritarian and democratic political systems, generates the need for indices that are able to accurately evaluate the continuum within different subtypes of democracies (Lauth et al. 2000b, 8-9; Welzel 2000, 134). All these political developments lead to the idea of considering the quality of democracy as a matter of degree, which equally requires a gradual measurement of democracy in order to converge to a more realistic depiction of political systems.[27] Put differently, dichotomous classifications are no longer sufficient to adequately depict the political reality and are thus replaced by polytomous conceptions and indices (Pickel 2000, 242; Bollen 1991, 9; Emminghaus/Nord 2000, 164).[28]

Apart from this, the need for assessing the quality of democracies rests upon a variety of additional reasons. For instance, the evaluation of democratic quality is vital to the field of "transformation research", as it contributes to understand the dynamics and stability of processes of democratization (Lauth 2006, 89). The research effort, hereby, does not focus on institutional subtypes of democracy, such as parliamentary vs. presidential or proportional vs. majoritarian systems, but rather on functioning vs. deficient democracies (Lauth 2004, 10-1; Lauth 2006, 89). Nonetheless, it is also important for established democracies to critically assess their respective democratic quality (Lauth 2006, 89). Thus, quality research also helps to better understand the democratic improvement, stagnation, or even regression of established democracies (Lauth 2004, 11).

The assessment of democratic quality also plays a key role for the testing and underpinning of theoretical concepts, such as modernization theory or the theory of "Democratic Peace" (Lauth 2006, 89).[29] Consequently, the empirical investigation of

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[27] "The concept of political democracy is continuous.", (Bollen 1991, 9)
[28] See 1.2 Review of the State of Research, 3
[29] According to the theory of „Democratic Peace", democracies do not engage in military operations or wars against each other. Put differently, war could be eliminated, if all countries were to transform into democracies (Gärtner 2005, 32). Especially within this context, the need for differentiated, polytomous democracy assessment gets obvious.

democratic quality contributes to other fields of research, which explore the interrelations of democracy and economic performance, regime stability, etc. (Lauth 2004, 11).

Finally, the evaluation of democratic quality also features two important political implications. On the one hand, country rankings are often used as a conditionality criterion for official development assistance (ODA) by the international community (Lauth 2004, 12; Lauth 2006, 89). Democracy rankings, therefore, always imply a need for political justification, as well. On the other hand, assessing the quality of democracy on a global scale helps to avoid the illusionary fallacy that the idea of democracy has already conquered the world. In fact, the empirical study of democracy makes evident, that only a small fraction of the world population lives in high-quality democratic political systems (Schmidt 2000, 416). That is why the evaluation of democratic quality has to distinguish properly between the institutionalized political structures and the constitutional reality (Pickel 2006, 111; Emminghaus/Nord 2000, 182).

Although the need for assessing the quality of democracy of political systems is undisputable, many questions and problems of this field still remain unsolved (Lauth et al. 2000b, 11-2): Should the idea of democracy be regarded as universal or rather culturally specific? [30] What are general elements and dimensions of every democracy?[31] What are the best indicators for measuring democratic quality? Should democracy measurement pursue a subjective or rather an objective approach?[32]

2.3 Problems of Conceptualization and Operationalization

Despite the fact, that there is a true need for assessing the quality of democracy, there is a wide range of problems and difficulties involved with this sub discipline of the empirical study of democracy. The problems include minimalist vs. maximalist democracy conceptions, theoretical universalism vs. cultural relativism, validity, reliability, and objectivity vs. subjectivity. In addition, scale construction, threshold problems, the weighting of dimensions, data availability, as well as index combination represent important challenges of conceptualization and operationalization. In consideration of this fact, each of these issues will be dealt with in the subsequent sections.

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[30] See 2.3.2 Universalism vs. Cultural Relativism, 18
[31] See 3 Principles and Dimensions of , 31
[32] See 2.3.4 Objectivity vs. Subjectivity, 20

2.3.1 Minimalist vs. Maximalist Democracy Concepts

Before starting measuring the quality of democracy, there is a need for clarification of the concept "democracy" (Lauth 2004, 12). [33] Particularly, the differentiated classification between regime types as well as within established democracies requires an adequate definition and proper operationalization of democracy (Lauth 2004, 14). In scientific literature there is an enormous variety of often confounding indicators, dimensions and attributes to assess democratic quality (Lauth 2004, 13; Hadenius 1992, 5). In this context, two different approaches can be distinguished; minimalist and maximalist democracy conceptions.

Both conceptions feature strengths and weaknesses. For instance, minimalist conceptions try to depict the reality with only few dimensions and indicators, thus concentrating on basic universal requirements for democracy (Coppedge/Reinicke 1991, 48; Lauth 2004, 25-6). [34] As a result, global comparative analyses are feasible (Lauth 2004, 23). At the same time, minimalist concepts suffer from validity problems (Bogaards 2007, 1233; Abromeit 2001, 3). [35] Many countries are automatically top-ranked, because a differentiated classification of countries is often hardly possible (Coppedge/Reinicke 1991, 58). Besides, minimalist conceptions often only refer to the equality and liberty principles, thereby, neglecting the democratic principle of control (Lauth 2006, 91). [36]

By contrast, maximalist concepts focus on a more comprehensive depiction of democratic reality by including auxiliary preconditions and conducive factors of democracy (Bollen 1991, 8; Lauth 2004, 29). As a result, the problem arises that the measurement of political democracy is often confounded with other concepts, such as economic growth, wealth, stability, or socio-economic development (Bollen 1991, 8). This, in turn, may lead to serious difficulties of operationalization (Lauth 2004, 21).

All in all, the measurement of democratic quality faces a dilemma of conceptualization: Either the researcher follows a minimalist concept, thereby risking significant validity problems, or he chooses a maximalist concept with the problems of complex operationalization and data availability (Bogaards 2007, 1233). Bearing in mind this

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[33] „Bevor man mit dem Messen anfängt, muss man wissen, was genau man messen will." (Abromeit 2001, 3)
[34] For instance, Dahl's „polyarchy"-concept explicitly refers to the political dimension of democracy, trying to identify the most basic democracy requirements (Dahl 1971).
[35] See 2.3.3 Validity and Reliability, 18
[36] See 3 Principles and Dimensions of Democratic Quality, 31

dilemma, the model, developed within this diploma thesis, applies a rather narrow democracy conception in-between these both extremes. It focuses on the political dimension of democracy and incorporate all three basic principles of democracy, notably equality, liberty, and control (Lauth 2004, 31).[37]

2.3.2 Universalism vs. Cultural Relativism

Like other disciplines of social science, empirical democracy research operates within the stress ratio of universalism vs. cultural relativism (Lauth 2004, 13). One often cited point of criticism is that the measurement of democratic quality predominantly suffers from a eurocentristic perspective (Lauth 2004, 20). Critics put forward that the evaluation of democracy requires much more context-sensitive operationalizations (Lauth 2004, 20). Abromeit (2001), for example, criticizes the "institutional fallacy", i.e. solely institutionally focused democracy conceptions, thereby using established democracies as a benchmark for all other democracies. She stresses the fact that this approach rather measures the convergence of a country to the system of the "hegemonial benchmark country" (Abromeit 2001, 2).[38]

Though there may be considerable cultural bias in the course of the process of democracy conceptualization, a universal approach to measure democratic quality nonetheless features some legitimacy, especially, against the backdrop of the universality of the democratic idea. Besides, no real comparative democratic research would be feasible, if the universal assumption of democratic values was negated (Lauth 2004, 23). As a result, there is a need for a universal definition, conceptualization, and operationalization of democracy, which allows for a differentiated evaluation of democratic quality. In this context, two goals must simultaneously be achieved; the differentiation of distinct regime types as well as the nuanced evaluation of established democracies (Lauth 2004, 23).[39]

2.3.3 Validity and Reliability

In general, democracy assessment suffers from significant flaws concerning its objectivity, validity and reliability (Lauth 2004, 305). Though they are all interrelated to

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[37] See 2.1"Democracy" as the Central Term, 12;
[38] Abromeit (2004) underscores that high inter-correlations of democracy indices do not necessarily approve their respective concept validity. According to her, the weakness of the instruments, measuring democratic quality, is often due to their exclusively institutional, onesided perspective. (Abromeit 2004, 75-6)
[39] See 2.3.1 Minimalist vs. Maximalist Democracy Concepts, 17

some degree, the last two of them will be dealt with separately within this subsection of the chapter.

Reliability refers to the clarity and repeatability of democracy measurements. In this connection, there are several criteria for reliability, including the clarity of indicators, the clarity of scaling, and the objectivity of the researcher concerning potential ideological bias (Lauth 2004, 231). In addition, reliability also refers to the clarity of indexation in terms of data aggregation[40] and thresholds[41], the testing of reliability, as well as the transparency of data sources (Lauth 2004, 231). Especially the last point reveals the necessity of achieving a broad variety of sources, including journal articles, magazines, year books, official statistical data, scientific case studies, NGO data, etc. in order to decrease the potential bias of the actual sources (Lauth 2004, 306-7).

Validity, by contrast, generally focuses on the congruence of what is attempted to be measured and what is actually been measured (Pickel/Müller 2006, 135). In this conjunction, there are three distinct types of validity, among them content validity, criteria validity, as well as construct validity (Lauth 2004, 231-2; Lauth/Winkler 2002, 67). The first one, *content validity*, deals with the question whether the theory applied coincides with its operationalization (Lauth 2004, 231).[42] Put differently, it questions whether all relevant aspects of a theoretical concept are depicted by its indicators. Derived from this, a proper definition of democracy is vital to the content validity, as well as for the validity of the indicators used (Lauth 2004, 233).

Apart from this, *criteria validity* aims at exogenous validity testing under the assumption that the external variable measures the same like the internal one (Lauth 2004, 231). This approach, however, is difficult to be realized for democracy assessment, as it is nearly impossible to find two variables, especially exogenous ones, which measure exactly the same issue (Lauth 2004, 232). Finally, *construct validity* refers to the validation of internal coherence of a theoretical concept via other theoretical concepts (Lauth 2004, 232). Similar to the criteria validity, the guarantee of construct validity is hardly achievable for democracy research, as there is the potential danger of

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[40] See 2.4 Assessing the Concept Quality of Democracy Indices, 26
[41] See 2.3.6 Threshold Problem, 22
[42] For instance, Bollen (1991) stresses that voter turnout might have little to do with political democracy due to external influencing factors, such as the obligation to vote, fraud, etc. (Bollen 1991, 4) According to Bollen (1991) indicators have to be as valid as possible and also applicable in empirical research. (Bollen 1991, 10-5)

confounding democracy conceptions with other theoretical constructs (Bollen 1991, 8; Lauth 2004, 232).[43]

Due to the manifold challenges in guaranteeing the validity of democracy assessments, there is a need for validity tests. Thereby, recent research efforts reject endogenous cross validation, as there remains the problem of "tautological fallacy", which means that neither of the democracy indices truly measures democracy, although their inter-correlation may be high (Welzel 2000, 136; Abromeit 2004, 76).[44] Consequently, political scientists nowadays rather advocate exogenous validation of democracy measures, e.g. human development and democracy, in order to guarantee an external measurement yardstick (Welzel 2000, 136).[45] Nonetheless, it is difficult to find objective benchmark criteria to assess the validity of specific democracy evaluations (Lauth 2006, 90).

2.3.4 Objectivity vs. Subjectivity

Closely related to the question of measurement validity and reliability is the question of objectivity vs. subjectivity of democracy assessments within the broader frame of qualitative vs. quantitative research (Lauth 2004, 227). Among the variety of democracy indices, there is only one truly quantitative, objective index, notably Vanhanen's ID (Lauth 2004, 245). Besides, there are exclusively qualitative, subjective democracy measures, as well, e.g. democratic audits (Beetham 1994a; Beetham 1994b; Weir/Beetham 1999).[46] In between those two extremes, the vast majority of indices follows a quantifying, quasi-objective approach, based on subjective expert judgments, which are then transformed into scale ratings (Pickel 2000, 243).

Besides the methodological particularities of the indices, all democracy measurements should principally aim at high levels of objectivity. Three major types of objectivity can be distinguished, among them execution objectivity, evaluation objectivity, as well as interpretation objectivity (Lauth 2004, 227). *Execution objectivity* refers to the independency of measurement processes from the researcher, which means that indicators should not be ambiguous in terms of interpretation (Lauth 2004, 228). *Evaluation objectivity*, by comparison, aims at result independency from the researchers' codification (Lauth 2004, 228). In this context, however, the problems of data allocation correlate with the degree of differentiation (Lauth 2004, 228).

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[43] See 2.3.1 Minimalist vs. Maximalist Democracy Concepts, 17
[44] See 6.4.1 Comparison QDI Results vs. Constituent Indices, 89
[45] See 6.4.2 Comparison of QDI Results vs. External Values, 90
[46] See 1.2 Review of the State of Research, 3

Put differently, evaluation objectivity decreases, the more fine-grained the modes of differentiation are (Lauth 2004, 228).[47] Finally, *interpretation objectivity* refers to the handling and processing of the quantified material as well as to the threshold problem (Lauth 2004, 229).[48]

The detailed discussion of different types of objectivity underlines the fact that democracy assessment aims at reducing measurement bias, because it substantially undermines the significance of empirical results and country comparisons (Bollen/Paxton 2000, 58). This undermining may be traced to eurocentrism[49], the impossibility of having first-hand and in-depth knowledge of all countries assessed, or the potential bias in secondary sources in general (Bollen 1991, 13-4). Especially Bollen (Bollen 1991; Bollen 1993; Bollen/Paxton 2000) has elaborated criticism on subjective democracy indicators and measures, as he found out that judge-specific errors play a substantial role in measurement bias and that these "method factors" are stable over the years (Bollen/Paxton 2000, 71).[50]

Similar to the three subtypes of objectivity described above, Bollen (Bollen/Paxton 2000) identifies a threefold judge-specific error. Firstly, bias may occur in gathering information due to filtering processes as well as the consideration of non-representative information. Secondly, the information processing itself may significantly distort empirical results, as the distinction between relevant and irrelevant information may be malfunctioning. Thirdly, the translation of the processed information into country ratings may be prone to systematic bias, because judges differ in terms of their measurement and aggregation methods (Bollen/Paxton 2000, 62-4). The overlaps with the aforementioned three types of objectivity are obvious.

Of course, data selection always produces some bias due to cognitive, normative, and ideological selectivity and thus subjective evaluations (Beetham/Weir 2000, 78). Consequently, measurement processes always require a sound documentation of all sources utilized (Lauth 2004, 308). In order to eliminate the flaws of subjective democracy measurement, Bollen/Paxton (2000) suggest kind of a standard operation procedure: Firstly, there is need for a proper definition of democracy.[51] Secondly, democracy dimensions with appropriate indicators must be identified. Thirdly, the way

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[47] See 2.3.5 Scale Construction, 22
[48] See 2.3.6 Threshold Problem, 22
[49] See 2.3.2 Universalism vs. Cultural Relativism, 18
[50] "The judges are creating consistent, systematic error in the ratings of democracy." (Bollen/Paxton 2000, 71)
[51] See 2.1 "Democracy" as the Central Term, 12

how the indicators are created as well as the particular relations between indicators and actual dimensions must be clarified. Finally, validity and reliability estimates have to be added (Bollen 1991, 15).

Moreover, measurement bias can be diminished by improving democracy indices in order to delimit the impact of "method-factors" (Bollen/Paxton 2000, 78). One option is simply to be aware of the potential threat of the bias, and hence not to overestimate the empirical findings. Additionally, a panel of judges with diverse backgrounds may be installed in order to reduce the ideological, normative bias of the researchers. Ultimately, the use of objective measures may be extended, although then the question of adequately weighting the various indicators arises (Bollen/Paxton 2000, 78-9).[52]

2.3.5 Scale Construction

One of the goals of empirical democracy measurement is to generate accurate scales for the differentiated assessment of political systems (Croissant/Thiery 2000, 89). In this context, different types of scales are applied, including nominal, ordinal, interval, and ratio scales (Lauth/Winkler 2002, 66; Lauth 2004, 235). *Nominal scales* allow only one distinction, e.g. the classification of authoritarian vs. democratic regimes (Lauth/Winkler 2002, 66). Furthermore, *ordinal scales*, as contrasted with *interval scales*, enable to identify relations between objects without indicating the logical distance between them (Lauth/Winkler 2002, 66). Finally, *ratio scales* are additionally related to a neutral, zero point, e.g. the share of votes of a party in elections (Lauth/Winkler 2002, 66).

Though there is a number of different scale levels, measuring democratic quality still faces an unsolved problem, i.e. the accurate classification of political systems (Croissant/Thiery 2000, 90; Lauth 2004, 305). Especially, the area between democracies and authoritarian regimes requires an instrument for the differentiated evaluation of democratic quality (Croissant/Thiery 2000, 95). However, empirical research has to bear in mind the problem of diminishing reliability, if the number of scale categories increases (Lauth 2004, 305).

2.3.6 Threshold Problem

Closely linked to the problem of scaling is the problem of identifying accurate thresholds for regime classification (Pickel/Müller 2006, 169). The question of

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[52] See 2.3.7 Weighting of Dimensions, 23

appropriate thresholds arises due to the dilemma between the need for gradations for a differentiated depiction of reality, on the one hand, and the idea of clear-cut regime classification, on the other hand (Lauth 2004, 110).

In general, there are two strategies to solve the threshold problem. Firstly, thresholds may be totally omitted (Lauth 2004, 113-4). Thus, each country would be considered to be a democracy, while only differing in its degree. Secondly, thresholds may be retained, though not on the aggregate but rather on the sublevels of democracy indices (Lauth 2004, 114). This may circumvent the fallacy of compensating low results in one dimension with better results in other dimensions (Lauth 2004, 311). A political system would rank as a democracy only under the condition of passing all the relevant minimum sublevel thresholds.

Either with or without thresholds, there is always a need for theoretical reflection (Lauth 2004, 310). In general, the idea of assuming democracy as a continuum of differing gradations seems to be more suitable than simple categories, especially because the threshold problem aggravates if opting for low-differentiating regime categorizations (Lauth 2004, 11; Welzel 2000, 135; Pickel 2000, 242).[53]

2.3.7   Weighting of Dimensions

The indexation constitutes the inversion of the disaggregation of the democracy concept into dimensions and indicators (Lauth 2004, 309). Thereby, the problem of weighting the various indicators arises. In principal, the process can either be additive or multiplicative (Lauth 2004, 309). In the former case, countries can compensate bad ratings in one democracy dimension, if they rate better in the remaining ones. In the latter case, the multiplicative alternative, no compensation is feasible. If one category rates zero points, the whole result becomes zero (Lauth 2004, 309).[54]

Concerning the process of indexation, there must be borne in mind, that also the pure selection of indicators itself represents an immanent kind of weighting (Lauth 2004, 309). However, it is rather impossible to find an adequate way of accurately weighting democratic dimensions, as there is no sound theoretical justification for determining

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[53] With reference to this threshold problem, the QDI will forgo the attempt of regime classification and provide a country ranking with differing gradations instead.
See 6.2 Aggregation Methodology of the QD-Index, 82
[54] Vanhanen's ID explicitly refers to the multiplicative alternative (Vanhanen 2003).

particular percentages.[55] Due to the fact, that weighting has the most important impact on final rating results, there is a need for sound theoretical reflection of the whole process (Lauth 2004, 310).[56] This need intensifies in case of high numbers of indicators (Vanhanen 2000, 185).

2.3.8 Data Availability

A specific problem in comparative democracy research is the question of data availability and information filtering processes concerning the countries assessed, which is illustrated in figure 4. This problem holds especially true for political systems that can be classified as "non-democracies". The problem of data availability aggravates, as the number of countries evaluated as well as the variety of indicators increase (Pickel 2000, 249; Vanhanen 2000, 185).
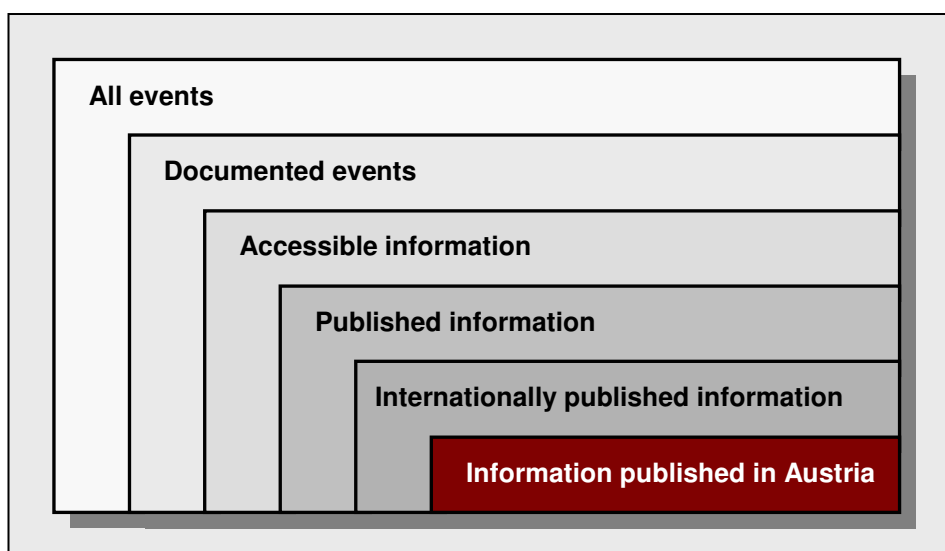
Fig. 4: Data Availability Problem
(Source: Own illustration following Bollen 1993, 1213)

Especially, in African countries data availability may represent a substantial obstacle in assessing their quality of democracy (Emminghaus/Nord 2000, 179). This underlines the data base dilemma for non-consolidated democracies: On the one hand, there is a need for differentiated assessment of the actual particularities of these countries. On the other hand, insufficient data availability may hamper accurate evaluation and comparability (Emminghaus/Nord 2000, 180). In fact, the reliability of democracy

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[55] "[…] it is not possible to defend convincingly a position saying that one element is x or y times more important for the advancement of electoral democratization than some other element." (Elklit 1994, 107)
[56] See 6.2 Aggregation Methodology of the QD-Index, 82

measurement correlates with the level of development of the country evaluated (Emminghaus/Nord 2000, 181).

Of course, there are strategies to deal with so called "missing values". Firstly, if data is lacking for a specific indicator or dimension, the whole country could be eliminated from the assessment and the subsequent ranking (Coppedge/Reinicke 1991, 49). However, this strategy may lead to the elimination of a whole range of countries, if the evaluation conception is based on a complex variety of indicators. This in turn may lead to an additional bias due to the invalid rating improvements of the other countries (Coppedge/Reinicke 1991, 49). Secondly, missing values could simply be rated with zero points, an arithmetic mean of all other countries' indicators, or the average score of that country in its other dimensions (Campbell/Sükösd 2002, 11). This second approach avoids the elimination of the countries with missing values. Problematic, however, is the theoretical justification of ascribing arbitrary ratings to missing values.

2.3.9 Index Combination

In consideration of the manifold challenges concerning the evaluation of democratic quality, which have been described above, most recent research efforts focus on the combination of current democracy indices (Lauth 2006; Campbell/Sükösd 2002).[57] In this context, the goal is to generate more valid and more reliable overall measurement instruments that enable more accurate country assessments for a better understanding of the complex democracy dynamics (Pickel/Müller 2006, 168; Lauth 2006, 103). Index combination may enable the avoidance of singular index problems, while simultaneously providing solutions for one-sided, minimalist democracy measurements (Pickel/Müller 2006, 170). Especially, the combination of quasi-objective and quantitative indices could lead to a more reliable country evaluation (Keman 2002b, 47).[58]

Nevertheless, there are challenges involved with index combination, as well. For instance, different democracy indices may be based on different theoretical conceptions of democracy. In addition, disaggregated data from expert judgments may not be available due to the lack of methodological transparency (Lauth 2004, 317).

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[57] At first, Lauth (2004) doubts the utility and feasibility of index combination: "*Diese verlockende Idee ist leider zum Scheitern verurteilt.*" (Lauth 2004, 317) However, two years later Lauth (2006) presents an approach of index combination by combining Freedom House, Polity and Worldwide Governance Indicators.

[58] This is the methodological core of the QDI developed in this diploma thesis.

2.4   Assessing the Concept Quality of Democracy Indices

The bottom line of the previous section is that there are many conceptual as well as methodological problems concerning the measurement of democratic quality. Many of the indices simply do not meet minimum scientific criteria (Munck/Verkuilen 2002, 7). Although the indices normally highly correlate in terms of regime classification, they suffer from adequate ascertainment of democratic quality (Lauth 2006, 92-3). [59] The problem aggravates, as the degree of scale differentiation and its inherent variance increase (Lauth 2006, 93). Consequently, there is a need for a sound and systematic methodological discussion (Lauth 2006, 93).

Due to the fact that assessing the quality of democracy is an extremely complex issue as well as due to the research gap of accurate operationalization of theoretical constructs, most recent scientific research tries to evaluate the actual concept quality of democracy indices on a comparative basis (Pickel 2000, 262; Munck/Verkuilen 2002; Müller/Pickel 2007). This field of research serves as a "meta-evaluation" of the evaluations generated by the democracy indices (Pickel/Müller 2006, 136). In this respect, two pioneering attempts have to be mentioned, notably those of Munck/Verkuilen (2002) and Müller/Pickel (2007).

2.4.1   Approach by Munck/Verkuilen (2002)

Munck/Verkuilen (2002) criticize that there is little emphasis on methodological questions in the field of empirical democracy research (Munck/Verkuilen 2002, 7). They identify three major challenges in the frame of democracy evaluation, including conceptualization, measurement, and aggregation (Munck/Verkuilen 2002, 7). *Conceptualization* refers to the identification of adequate democracy attributes as well as their logic, vertical organization. The problem, of course, is the lacking of a definite guide to determine which attributes should be taken into account (Munck/Verkuilen 2002, 7-8). Munck/Verkuilen (2002) criticize the application both of minimalist and maximalist definitions, thus, the overloading of concepts vs. the potential danger of ignoring fundamental democracy attributes (Munck/Verkuilen 2002, 9). [60]

The sound vertical organization of the relevant attributes should be carried out according to their actual degree of abstraction, from the concept to the attributes to the components of attributes (Munck/Verkuilen 2002, 12). This process of disaggregating

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[59]   "Fakt ist, ein allgemeingültiger und allgemein anerkannter Demokratieindex existiert bislang nicht." (Pickel 2006, 131)
[60]   See 2.3.1 Minimalist vs. Maximalist Democracy Concepts, 17

the attributes is valuable in a dual manner, it helps avoiding the redundancy of democracy indicators and simultaneously provides the basis for the subsequent measurement step (Munck/Verkuilen 2002, 13).

The *measurement* stage starts at the lowest level of abstraction and obtains two important tasks, including the selection of indicators and the selection of the measurement level (Munck/Verkuilen 2002, 15). Munck/Verkuilen (2002) advocate using multiple indicators with cross-cultural equivalence for one attribute. Put differently, they emphasize the need for universally apt indicators (Munck/Verkuilen 2002, 15-6). In consideration of the fact, that evaluating democratic quality will always entail measurement error and data availability problems[61] to some degree, the authors come out in favor of selecting indicators that are less subject to bias and which can be based on various sources (Munck/Verkuilen 2002, 16).

Concerning the second task, the selection of adequate measurement levels, researchers should bear in mind both the avoidance of too detailed and too superficial scaling with little potential for differentiation (Munck/Verkuilen 2002, 17). Munck/Verkuilen (2002) underscore that the selection of accurate measurement levels represents one of the greatest deficits of current democracy indices (Munck/Verkuilen 2002, 18). In addition, they favor coder panels in order to guarantee inter-subjective measurement reliability.[62] However, the authors also emphasize that high reliability may not necessarily be ensured through high validity, as all coders may be equally subject to systematic bias (Munck/Verkuilen 2002, 18).

The last of the three challenges is the *aggregation* stage. Thereby, the process of disaggregation of the conceptualization stage gets reversed (Munck/Verkuilen 2002, 22). Munck/Verkuilen (2002) stress the necessity of the theoretical justification of the aggregation level as well as the aggregation procedure (Campbell 1996, 23). Particularly, the authors highlight that the relations among the identified democracy attributes and the aggregation rule must coincide theoretically. They advise against too high levels of aggregation, for instance the production of a single overall score because of the immanent potential danger for loss of result validity and thus a loss of information (Munck/Verkuilen 2002, 22-5).[63]

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[61] See 2.3.8 Data Availability, 24
[62] See 2.3.3 Validity and Reliability, 18
[63] See 6.2 Aggregation Methodology of the QD-Index, 82

2.4.2 Approach by Müller/Pickel (2007)

Based on the deliberations of Munck/Verkuilen (2002), Müller/Pickel (2007) analogously emphasize the need for inter-subjectively comprehensible criteria for the assessment of democratic quality (Müller/Pickel 2007, 512). This need arises due to the waves of democratization and thus the question of how democratic democracies really are (Pickel 2000, 242-3; Müller/Pickel 2007, 511).[64] In this context, the authors advocate the validation of measurement concepts, especially concerning the methodological conceptualization of indices, including the critical analysis of their components in terms of validity and reliability (Müller/Pickel 2007, 513).

However, the authors criticize both endogenous and exogenous validity tests (Müller/Pickel 2007, 514-5). The first one only tests the validity in terms of internal consistency. By contrast, the second alternative tries to establish an external point of reference, such as accompanying factors of democracy, to test the validity of the democracy concept (Müller/Pickel 2007, 515). The problem related with this approach concerns the lacking of the proof of the real interrelationship between democracy and these factors. As a consequence, exogenous quantitative validity tests remain to be of little value (Müller/Pickel 2007, 515).

In consideration of the deficits of current concept validations, Müller/Pickel (2007) advocate a qualitative approach, because the question, of how democratic democracies really are, heavily depends on the quality of the actual measurement concept that aims at answering this question (Müller/Pickel 2007, 515-6). Their general assumption is that valid indicators and valid measurement results can only stem from an accurate methodological procedure (Müller/Pickel 2007, 516). The authors' approach, therefore, represents a meta-approach to evaluate democracy indices. Their qualitative statements are codified[65] and thus quantified in order to enable the comparison of selected indices (Müller/Pickel 2007, 518).[66]

Müller/Pickel (2007) operationalize the approach proposed by Munck/Verkuilen (2002). They also refer to the three major challenges concerning the measurement of democratic quality, notably conceptualization, measurement, and aggregation

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[64] See 1.1 Topic of the Diploma Thesis, 1
[65] The comparison of the indices is conducted by a three-stage ordinal scale: POS [+], INTERMED [+/-], NEG [-]. The scores are simply aggregated for each criterion. Thereby, all criteria are weighted equally. (Müller/Pickel 2007, 518)
[66] Müller/Pickel (2007) evaluate six indices: Bertelsmann-Transformation-Index (BTI), Polity-Index, Freedom House, Vanhanen's ID, Index of Defective Democracy, Democratic Audit. (Müller/Pickel 2007, 513)

(Müller/Pickel 2007, 517).[67] However, the authors go further and identify a wide range of indicators for each challenge, which is basically illustrated in figure 5.

The first challenge, the conceptualization, comprises two elements, the *concept specification (1.1)* and the *concept logic (1.2)* (Müller/Pickel 2007, 519). The concept specification refers to the need to incorporate all relevant and necessary attributes into a democracy conception provided by an index. Following Munck/Verkuilen (2002), Müller/Pickel (2007) distinguish two elements of concept specification, *economicalness (1.1.1)* as well as *relevance (1.1.2)*, thus highlighting the dilemma of maximalist vs. minimalist democracy conceptions.[68] Economicalness focuses on the application of a procedural democracy conception with a clear-cut political perspective, while rather neglecting socio-economic factors. Relevance, by contrast, refers to the question of whether all fundamental principles and dimensions of democracy have been considered in the process of conceptualization (Müller/Pickel 2007, 519).

Apart from this, concept logic consists of the sub elements *redundancy (1.2.1)* and *conflation (1.2.2)*. The first one deals with the question of explicit or implicit multiple measurements of democracy attributes, whereas the second one refers to the consistent allocation of attributes to democracy dimensions (Müller/Pickel 2007, 525).

The subsequent challenge, i.e. measurement, consists of three sub elements, including the *validity of indicators (2.1)*, the *validity of scaling or coding (2.2)*, and its *replicability (2.3)*. The validity of indicators itself emphasizes the question whether the indicators actually measure what they aim to measure, *correct measuring (2.1.1)*, as well as the need for a wide *scope of sources (2.1.2)* from diverse backgrounds for these indicators. The validity of scaling as the second element within the frame of measurement refers to the criterion of a *theoretical foundation (2.2.1)* for the scale chosen (Müller/Pickel 2007, 526-7).

The third sub element, i.e. replicability, investigates whether the analyzed democracy index reveals the *coding rules (2.3.1)* and the *sources applied (2.3.2)*, comments on *inter-coder reliability tests (2.3.3)*, as well as *disaggregated data (2.3.4)*. All of these factors aim at highlighting the need for transparency in order to avoid measurement errors when replicating democracy indices (Müller/Pickel 2007, 527).

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[67] See 2.4.1 Approach by Munck/Verkuilen (2002), 26
[68] See 2.3.1 Minimalist vs. Maximalist Democracy Concepts, 17

Finally, Müller/Pickel (2007) operationalize the third challenge, i.e. aggregation. Thereby, they focus on *validity of the aggregation level (3.1)*, the *validity of the aggregation rule (3.2)*, as well as the *replicability of aggregation (3.3)*. The indicators therefore are the *adequacy of the aggregation level (3.1.1)*, the question of *theoretical foundation (3.2.1)*, as well as the transparency and *applicability of the aggregation rule (3.3.1)*, respectively. In this connection, the authors advocate the application of meaningful aggregation levels and the avoidance of overly aggregated, single scores (Müller/Pickel 2007, 527-8).
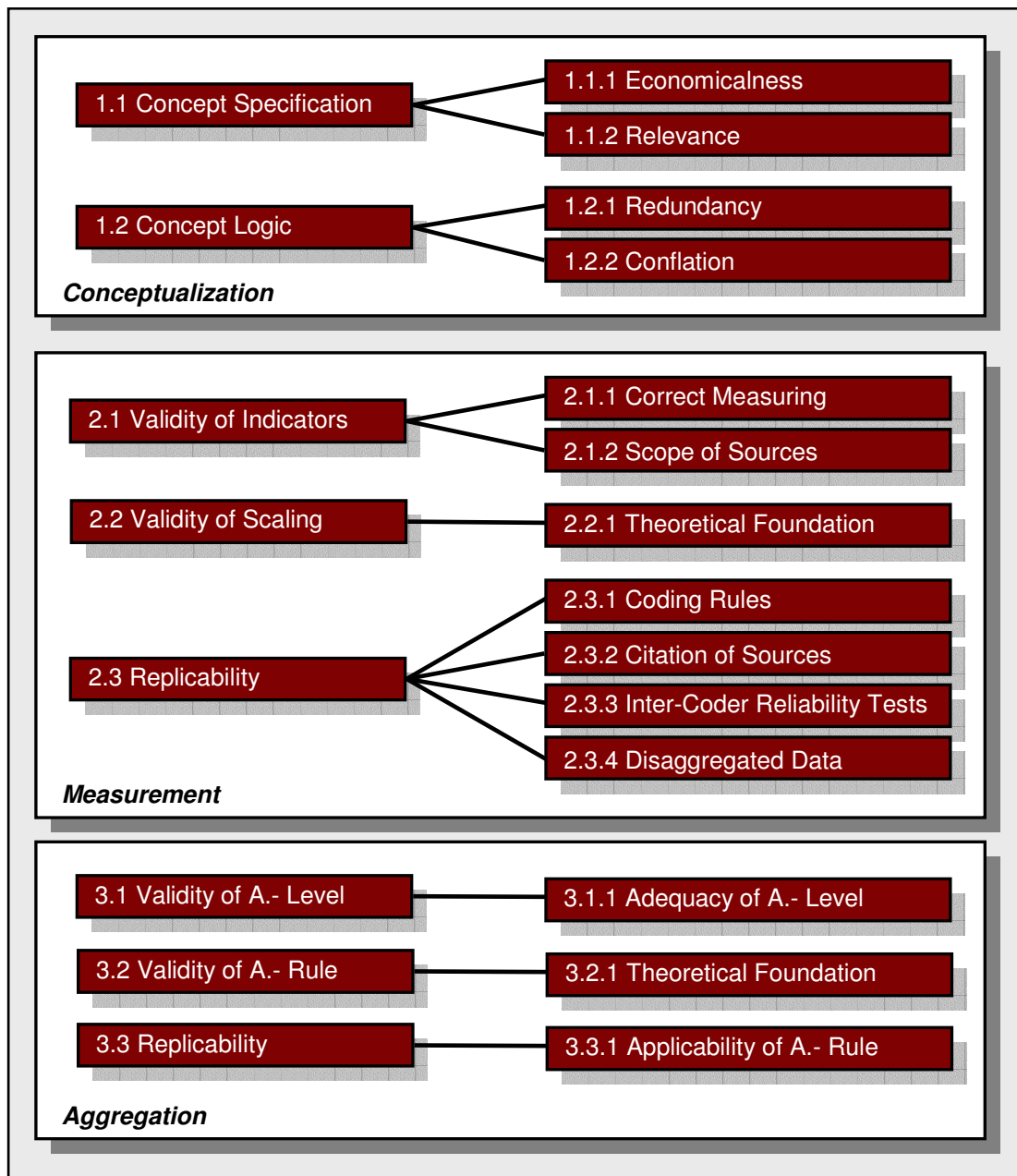
Fig. 5: Concept Validation Approach by Müller/Pickel (2007)

(Source: Own illustration following Müller/Pickel 2007, 520-3)

3 Principles and Dimensions of Democratic Quality

Before evaluating political systems in terms of their democratic quality, there is a need for identifying integral principles and dimensions of the concept "democracy". In this context, it is important to properly distinguish between necessary framework conditions, such as minimum levels of statehood and state-centered coercive power, on the one hand, and other conducive factors, such as a capitalist market system, on the other hand (Lauth 2006, 91; Lauth 2004, 53).

Based on a liberal democracy conception, three constituent principles of democratic regimes can be distinguished, including liberty, equality, and control (Lauth 2004, 31). Apart from these elements, numerous possible dimensions of democracy can be identified. Among them are the rule of law, vertical and horizontal accountability, responsiveness, transparency, competition, participation, effectiveness of representation, the guarantee of civil and political rights, etc. (Diamond/Morlino 2004, 21).

Against the backdrop of the great variety of democratic dimensions, it is obvious, that democracy represents a multi-dimensional rather than a one-dimensional framework (Diamond/Morlino 2004, 22).[69] In addition, trade-offs among the dimensions render impossible the attempt to maximize all of them simultaneously (Diamond/Morlino 2004, 21). Bearing in mind these challenges, the claim of measuring the democratic quality of political systems must correspond to its multi-dimensional nature.

3.1 Principles of Democratic Quality

There are three fundamental principles of democracy, notably liberty, equality, and control. The discussion of these elements is important, because they represent a stress ratio (Lauth 2004, 99). For instance, classic liberalism sees liberty endangered when there is too much emphasis on equality (Lauth 2004, 97-8). Analogously, the idea of liberty contrasts with exaggerated levels of control (Lauth 2004, 98). And finally, strict equality hampers the effectiveness of specialized control, because auditing offices, for example, could not be entitled to control other government branches (Lauth 2004,

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[69] "There is no objective way of deriving a single framework of democratic quality, right and true for all societies." (Diamond/Morlino 2004, 22)

98-9). All in all, it is rather the balance of these three fundamental democratic elements, which ensures high quality of democracy (Lauth 2004, 99).

3.1.1 Liberty

One of the principal elements of democracy is liberty (Lauth 2004, 55).[70] It is constitutive for democracy, as it allows its citizens to pursue their private goals without external interference. In this connection, elections are the most important instrument of liberty in terms of the political sphere, especially according to a procedural conception of democracy (Lauth 2004, 55).[71] However, liberty also requires some minimum socio-economic standards in order to be properly executed (Beetham 2004, 65).

3.1.2 Equality

Analogously, equality serves as another fundamental element of democracy. Within scientific research there is substantial debate over the question which type of equality should be applied when assessing the quality of democracy. Equality may be understood either as a minimalist legal equality or as a maximalist, substantive equality in terms of social and political resource endowment (Lauth 2004, 32).

Of course, a purely formal legal equality is not sufficient, as there must be a socio-economic basis (Lauth 2004, 49). Nonetheless, the question of socio-economic preconditions for democracy is more important for transition and consolidation research than for the assessment of democratic quality (Lauth 2004, 47).[72] The decisive factor from a procedural perspective is rather the citizens' political equality in terms of gender, race, ethnicity, political orientation, religion, etc. (Diamond/Morlino 2004, 27; Lauth 2004, 50) Notwithstanding, the necessity of socio-economic minimum standards also applies to the guarantee of political equality (Diamond/Morlino 2004, 27; Lauth 2004, 50).

Thus, the conception of equality of the QDI will rather follow the first alternative, notably legal and political equality of all citizens (Lauth 2004, 34). In this context, the research

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[70] *"[…] without liberty there can be no democracy."*, (Beetham 2004, 61); *"So democracy without freedom is a contradiction in terms."[70]*, (Beetham 2004, 62) For assessing the quality of democracy, Beetham (2004) proposes a fourfold mode of operation: Firstly, democratic goods must be defined. Secondly, standards of best practice have to be identified. Thirdly, the various modes of subversion of these democratic goods must be analyzed, before finally, agencies of protection against these subversions can be named. (Beetham 2004, 61)

[71] See 2.1 "Democracy" as the Central Term, 12

[72] Socioeconomic (in)equality is especially important within the Latin American debate (Lauth 2004, 47)

will focus on input-egalitarianism rather than output-egalitarianism (Lauth 2004, 54). Especially, in the context of participation, equality in weight and opportunities is more important than equality in impact (Lauth 2004, 35).

3.1.3 Control

The third important principle of democracy is control. However, there are great differences between current democracy indices concerning its conceptualization (Lauth 2000, 58). In general, the reign of the people is not unlimited in democratic political systems, as there are fundamental individual rights that delimit the sovereign rule (Lauth 2006, 91; Lauth 2004, 77). Questions related to the element of control concern the subject, the object, the mode, as well as the continuity of control actions (Lauth 2004, 81). Thereby, the effectiveness of control increases with its frequency (Lauth 2004, 87). Put differently, the greater the time spans between control activities, the lower is their impact (Lauth 2000, 59).[73]

In general, control activities can be classified into two major categories: political control, on the one hand, and legal control, on the other hand (Lauth 2004, 83). Agents of political control are parliaments, legal public institutions, audit offices, parties, organizations, civil society, as well as the media, whereas legal control is limited to the judiciary (Lauth 2004, 83). Both of these subtypes refer to a horizontal and a vertical level (Lauth 2004, 79).[74] Clearly, both types presuppose a minimum amount of transparency in order to be effective (Lauth 2004, 87).

3.2 Dimensions of Democratic Quality

Due to the focus on political democracy as well as on an institutional, procedural rather than an output and performance-oriented approach, this chapter will concentrate on the following dimensions of democracy: rule of law, civil and political rights, responsiveness, vertical and horizontal accountability, participation, and competition.

3.2.1 Rule of Law

The most fundamental dimension of democracy is the rule of law (O'Donnell 2004b, 32). Though the rule of law would be thinkable without democracy, due to the fact that other political regimes may also rest upon legal codifications, a democracy without the rule of law would be contradictory in terms (Lauth 2004, 166). In general, the rule of law

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[73] See 3.2.4.1 Vertical Accountability, 39
[74] See 3.2.4.2 Horizontal Accountability, 40; 3.2.4.1 Vertical Accountability, 39

aims at guaranteeing that no one is above the law, especially including all political representatives (O'Donnell 1999, 33).

Criteria for the rule of law comprise the generality of the law, the prohibition of personal or retroactive law, the equality of all citizens before the law, the binding of the state to the constitution and legislation, term limits for political representatives, the legality of public administration, and the transparency of political activities (Diamond/Morlino 2004, 23; Lauth 2004, 147; Maltz 2007, 131). In addition, the rule of law deals with legal certainty, independent and professional courts, the separation of power, the guarantee that the codified law is fairly applied irrespective of social status, class, gender, race, or ethnicity, that the law is publicly known and possible to follow (Lauth 2004, 147-8; O'Donnell 2004b, 33).

As can be derived from the manifold tasks described above, the rule of law represents a precondition for democratic quality.[75] It is the basis for horizontal and vertical accountability. Simultaneously, the rule of law enables the exercise of civil liberties and political rights, participation, as well as competition (Diamond/Morlino 2004, 26; Lauth 2004, 141).

Of course, democracy and the rule of law presuppose a minimum level of statehood in order to be effective (Lauth 2004, 167). The rule of law especially depends on state capacity in terms of homogeneous expansion over state territory (O'Donnell 2004b, 37).[76] In this context, the question arises, whether statehood is a defining factor or solely a precondition for democracy (Lauth 2004, 167). Within this thesis, state capacity will be regarded as a conducive factor, not as an integral democracy dimension.[77]

3.2.2 Rights

Closely related to the rule of law is the question of rights, because there is a fundamental relation between rights and equality, as they are principally guaranteed to all citizens equally (Beetham 2004, 64). In the course of the diploma thesis, the research effort will focus on civil and political rights due to their correspondence with a

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[75] "The rule of law is the base upon which every other dimension of democratic quality rests." (Diamond/Morlino 2004, 23)

[76] O'Donnell (O'Donnell 2004b) refers to „brown areas", if the rule of law does not expand homogeneously over state territory. (O'Donnell 2004b, 41)

[77] "State capacity means the extent to which interventions of state agents in existing non-state resources, activities, and interpersonal connections alter existing distributions of those resources, activities, and interpersonal connections as well as relations among those distributions.", (Tilly 2007, 16)

liberal and procedural conception of political democracy. Additionally, they represent the foundation for numerous other democracy dimensions, such as vertical accountability, participation, competition, or responsiveness (Beetham 2004, 65). Notwithstanding, civil and political rights require minimum socioeconomic standards in order to be properly executed (Beetham 2004, 64-5). However, it remains doubtful whether equality in civil and political rights also presupposes perfect equality in socioeconomic rights (Beetham 2004, 65).

3.2.2.1 Civil Rights

Civil rights or civil liberties comprise a multitude of different rights, including the freedom of conscience, thought, religion, feeling, expression, opinion, organization and association (Cunningham 2002, 28). In addition, they comprise the right for life and security of person, privacy, the liberty and freedom of movement and residence, the right of legal defense and due process, the freedom of information, as well as the right of protection against discrimination (Beetham 2004, 66; Diamond/Morlino 2004, 26). Closely related to these civil rights are also certain economic liberties, such as the freedom to choose a career as well as the guarantee of property rights (Lauth 2004, 57; Diamond/Morlino 2004, 26).

Concerning their nature all these civil rights represent negative liberties, as they guarantee some protection against astriction of personal individual freedom (Lauth 2004, 57). As such, they are fundamental to every democracy conception, especially the liberal, procedural one.[78] Apart from these negative liberties, there are also positive rights, which are more related to socio-economic issues, such as the absence of poverty or unemployment (Lauth 2004, 58). Due to the fact, that they are contested in terms of incorporating them into a democracy conception for evaluating democratic quality, they will be neglected within the research effort of this diploma thesis.[79]

Nonetheless, there is an immanent paradox within liberal democracy conceptions (Cunningham 2002, 39). Civil rights represent the liberal principle of democratic quality. However, there are limitations to this liberty, especially if citizens pursue goals that challenge the very basis of the liberal rights themselves. In this respect, it is important to note that the execution and guarantee of liberal rights refers to the operation within an established liberal democracy, without fronting the very foundations of the system (Cunningham 2002, 39; Lauth 2004, 61).[80]

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[78] See 2.1 "Democracy" as the Central Term, 12
[79] See 2.3.1 Minimalist vs. Maximalist Democracy Concepts, 17
[80] See 2.1 "Democracy" as the Central Term, 12

3.2.2.2 Political Rights

On the basis of civil rights, political rights comprise the right to elect main political representatives, to stand for elective public office, to vote directly in referenda on substantial changes in the constitution, to campaign, to organize political parties, etc. (Beetham 2004, 69; Diamond/Morlino 2004, 26). It is obvious, that political rights depend on the guarantee of civil rights to a large degree (Lauth 2004, 57).

For instance, organizing political parties presupposes the right to organization and association (Lauth 2004, 150). As a consequence, the separation of civil and political rights is difficult due to their interrelated nature. Analogously, political rights are equally important as prerequisites for other democracy dimensions, such as competition, participation, or vertical accountability (Diamond/Morlino 2004, 26).

3.2.3 Responsiveness

Another often cited dimension of democratic quality is responsiveness (Powell 2004). It refers to the extent to which citizens are satisfied with governmental and democratic performance (Diamond/Morlino 2004, 27). Put differently, responsiveness deals with the congruence of citizens' preferences and governmental action and policy output. This dimension is vital to the realization of democratic quality, as it reflects the will of the sovereign. However, there are serious difficulties concerning the operationalization of responsiveness, both from a theoretical and a practical perspective (Powell 2000, 14).

3.2.3.1 Theoretical Critique of Responsiveness

Firstly, from the theoretical perspective, modern societies feature diverse and multiple preference structures (Lauth 2004, 40). These preferences may be diffuse, contradictory, evenly divided over hot issues, and unstable over time (Roberts 2005, 370). Due to this complexity, it may be impossible to derive a single consistent, aggregated citizens' preference structure that could serve as a yardstick for policy decisions (Powell 2004, 93; Lauth 2000, 60; Lauth 2004, 90).[81] Because of this fact, output-oriented democracy conceptions may be less useful for the assessment of democratic quality (Lauth 2004, 44).

Besides, there is a problem of preference aggregation. For example, it may be the case that citizens, even well-educated ones, do not have preferences regarding every policy

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[81] See Arrow's theorem: Impossibility of generating a consistent overall preference order. (Lauth 2004, 40)

issue (Diamond/Morlino 2004, 28). If only the existing preferences would be taken into account, the principle of equality would be violated (Lauth 2004, 90). Additionally, it would be highly problematic from a theoretical point of view, if citizens were to be forced to develop preferences, as this would run contrary to the principle of liberty (Lauth 2004, 90).

Moreover, full responsiveness of political representatives may imply an immanent danger for minorities (Diamond/Morlino 2004, 29).[82] The majority could simply outweigh the preferences of the minority and thus endanger the rule of law, as well as the foundations of democracy itself (Lauth 2004, 43). As a result, there must always be a normative qualification of preferences, as well, in order to protect the overall democratic consensus (Lauth 2004, 43).[83]

3.2.3.2 Practical Critique of Responsiveness

Apart from the theoretical difficulties, there are also numerous practical challenges of implementing and operationalizing responsiveness. Firstly, the medium chosen for detecting the citizens' preferences influences the preference outcome to a substantial degree (Lauth 2004, 39). For instance, elections can only depict a limited picture of responsiveness and public preference articulation, as they occur only periodically (Lauth 2004, 92). In addition, citizens may be badly informed about governmental performance, which hampers responsiveness to be effective (Roberts 2005, 370; Lauth 2000, 61). In addition, there are various exogenous factors that influence political output and regime performance (Lauth 2004, 91). Due to these facts, good governments may be voted out of office, whereas bad governments may be reelected (Lauth 2004, 92).

Besides, elections as a valuable instrument of responsiveness face another challenge; citizens can only vote for whole policy packages, but no single policy issues (Lauth 2000, 60). Accordingly, parties constitute preference accumulations, bundles of more or less coherent citizens' preferences (Lauth 2004, 40, 90). Citizens may choose and vote for those parties that represent political positions which are least deviant from their own (Lauth 2004, 41). Consequently, responsiveness loses its significance as an indicator for democratic quality (Lauth 2004, 43).

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[82] See Toqueville's „tyranny of the majority" (Schmidt 2000, 140)
[83] See 2.1 "Democracy" as the Central Term, 12

Moreover, stringent responsiveness of political representatives to citizens may be problematic in case of the stress ratio between short-term and long-term preferences (Powell 2004, 96). Political leaders may avoid necessary long-term reforms that initially entail detrimental short-term impacts on citizens' lives. Especially in developing countries, this type of short-term responsiveness leads to the postponement of painful, yet necessary reforms (Roberts 2005, 369).

All in all, the question arises whether responsiveness can count as a valuable dimension of democracy (Lauth 2004, 43). Due to the weaknesses of the concept, especially in terms of operationalization and significance, other dimensions, such as vertical accountability, may be better suited instruments to assess democratic quality.

3.2.4 Accountability

In general, accountability deals with monitoring, control, checks, surveillance, restrain, and sanctioning (Schedler 1999, 14). Hence, it is more broad and inclusive than the concept of responsiveness. Accountability is inherent in the institutional structures of a political system, whereas responsiveness rather stems from the interaction within theses institutional structures (Ferejohn 1999, 131). Thus, the degree of responsiveness correlates with the extent to which an institutional structure permits accountability (Ferejohn 1999, 131).

There are many different types of accountability, including legal, financial, political, bureaucratic, governmental, military, and judicial accountability (Weir/Beetham 1999, 9; Schedler 1999, 22). Nevertheless, each of these types always comprises two components, answerability, on the one hand, and enforcement, on the other hand (Schedler 1999, 14). Basically, *answerability* refers to the right of the public as well as other state institutions to be informed and to receive explanation regarding government action (Schedler 1999, 15). Answerability comprises the subcomponents information and justification (Schedler 1999, 17). In this context, answerability requires transparency. Put differently, democratic accountability has to be public in order to work effectively (Schedler 1999, 20).

By contrast, *enforcement* focuses on rewarding good performance, while sanctioning bad one (Schedler 1999, 15). Especially, the threat of removal from office represents the most effective element of enforcement (Schedler 1999, 16). Of course, it is important that accountability involves sanction capacity. Otherwise, there would be no real accountability at all (Schedler 1999, 17). However, enforcement does not only

include sanctioning instruments; incentives for good political behavior are equally important.[84]

3.2.4.1 Vertical Accountability

On the basis of the introductory comments above, vertical accountability implies an upward stream from citizens to their elected political representatives (Diamond/Morlino 2004, 25).[85] Thereby, the citizens have two time perspectives: As illustrated in figure 6, voters hold their government accountable on a retrospective basis, thus, evaluating the past governmental performance. Simultaneously, they are prospectively mandating future governments (Powell 2000, 8).
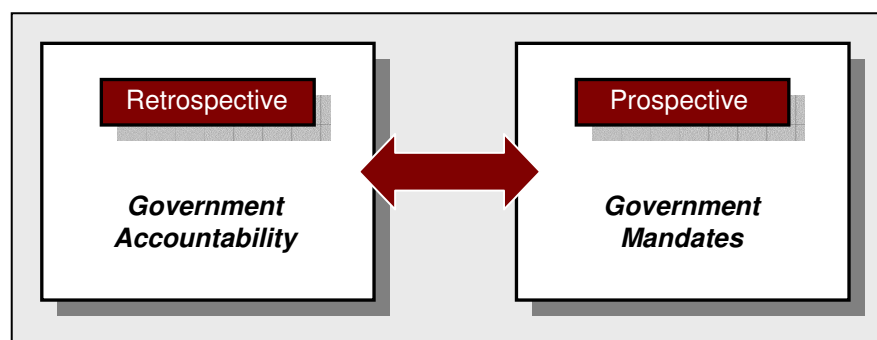
Fig. 6: Voter's Time Perspective
(Source: Own illustration following Powell 2000, 8)

Of course, elections represent the major instrument of accountability, because in a democratic political system citizens are entitled to vote incumbent governments out of office (Fearon 1999, 56; Powell 2000, 47). Accountability, therefore, occurs not only in relation to the general public, but also in terms of concrete policy content (Powell 2000, 3). Elections serve as the tool to enforce the accountability of policy makers, as the anticipation of potential loss of political power leads to compliant behavior (Powell 2000, 10-1). Once again, the close relationship between accountability and responsiveness becomes obvious.[86]

Nonetheless, accountability equally presupposes a set of minimum preconditions in order to work effectively, because it entails a relationship between unequals in terms of power, i.e. citizens vs. government (Schedler 1999, 23). Firstly, the citizens must be informed about policy issues to be able to evaluate political performance and

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[84] In this context, neo-institutionalism provides a fruitful scientific field of research. (Schedler 1999, 16)

[85] "Accountability, in short, implies an exchange of responsibilities and potential sanctions between rulers and citizens, [...]" (Schmitter 2004, 47)

[86] See 3.2.3 Responsiveness, 36

politicians' behavior (Powell 2000, 51). In this context, freedoms of opinion and association as well as a free media form the basis for continuous monitoring and demanding justification (O'Donnell 1999, 29; Schmitter 2004, 48; Diamond/Morlino 2004, 25). [87] Similarly, competition and participation serve as a foundation for meaningful vertical accountability (Diamond/Morlino 2004, 25).

Secondly, citizens must be aware of which politicians are actually responsible for specific policy outcomes (Powell 2000, 51). Thirdly, accountability requires meaningful elections, because otherwise effective accountability is not feasible (Powell 2000, 51). Finally, vertical accountability depends on effective sanctioning mechanisms, i.e. politicians must lose their power subsequent to voter disapproval (Powell 2000, 12).

3.2.4.2 Horizontal Accountability

Whereas vertical accountability must exist in political systems in order to classify as "democratic", horizontal accountability goes beyond this definitional minimum criterion and rather represents an element of democratic quality (O'Donnell 2004b, 37). Basically, it refers both to the legality of state action and the constitutionality of public laws (Lauth 2004, 89). The horizontal element of this accountability type stems from the fact that the interacting state agencies are principally equally endowed with power.[88]

There are numerous agents engaging in horizontal accountability activities, e.g. the legislative opposition, investigative committees, regulatory and auditing agencies, state ombudsmen, central banks, the judiciary, human rights courts, as well as the constitution itself (Schmitter 2004, 53; Diamond/Morlino 2004, 26). The concept of horizontal accountability, thus, refers to the prevention of power abuse through the separation of power as well as a system of "checks and balances" (Lauth 2004, 79; Schedler 1999, 23). As such, horizontal accountability features significant intersections with the concept of the rule of law (Lauth 2004, 79).[89]

Nonetheless, horizontal accountability violates the principle of equality to some extent.[90] This is due to the fact that there are state agencies, which are entitled to control and sanction other state agencies. As a result, these agencies may not be

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[87] See 3.2.2.1 Civil Rights, 35; 3.2.2.2 Political Rights, 36
[88] "Horizontal accountability is a matter of interactions, not between rulers and ruled, but between arms of branches of the regime and state acting according to preset constitutional or legal rules." (Schmitter 2004, 53)
[89] See 3.2.1 Rule of Law, 33
[90] See 3.1.2 Equality, 32

perfectly equal concerning their political and legal power, which forms the "paradox of horizontal accountability" (Schedler 1999, 24). In consideration of this problem, the question of second-order accountability of the controlling agencies arises (Schedler 1999, 26). As illustrated in figure 7 there are institutional settings to avoid this second-order accountability problem (Schedler 1999, 26).
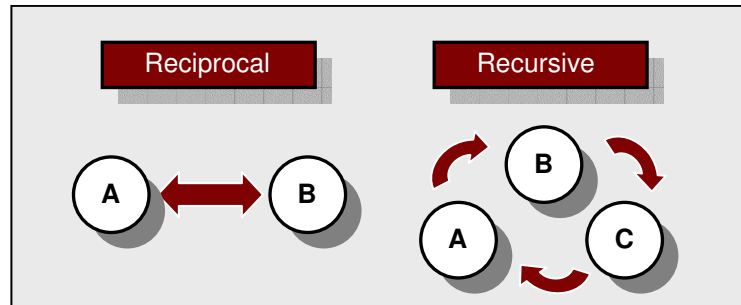
Fig. 7: Reciprocal vs. Recursive Horizontal Accountability
(Source: Own illustration following Schedler 1999, 26)

In general, the effectiveness of horizontal accountability is contingent upon the interrelated working of auditing institutions, which is backed by an independent judiciary. Put differently, it is the dense network of agencies rather than isolated institutions that guarantee the effective impact of horizontal accountability (O'Donnell 1999, 39-41).

Of course, there are obstacles concerning the full implementation of this type of accountability, especially if there are state institutions which are excluded from the auditing process or if corruption occurs (O'Donnell 1999, 41). Modalities of counteracting the potential dangers to horizontal accountability include the strengthening of opposition parties, the installation of professional accounting and auditing agencies as well as an independent judiciary (O'Donnell 1999, 44). Furthermore, political representatives acting as role models, the avoidance of extreme social inequalities, an independent media, and strong legislatures all conduce to the guarantee of effective horizontal accountability (O'Donnell 1999, 45; Fish 2006, 12).

3.2.4.3 Critique of Acc

Similar to the critique of responsiveness as a dimension of democratic quality, accountability, especially the vertical type, features many weaknesses in terms of operationalization.[91] At first, there is a certain "fallacy of idealism", which means that there is no such thing as a "best" democracy (Schmitter 2004, 51). Especially, younger

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[91] See 3.2.3 Responsiveness, 36

democracies may not simply be benchmarked against highly developed and long-established democracies (Schmitter 2004, 51).

In addition, external factors may influence governmental performance. Consequently, bad governments may be rewarded, whereas good ones may be punished in the frame of accountability (Roberts 2005, 371). Besides, unpopular political decisions may be coupled with popular ones, thus, making accountability difficult to work effectively, especially via elections (Ferejohn 1999, 132). Elections also only occur infrequently, which impedes continuous vertical accountability (O'Donnell 1999, 30). And even if elections take place on a regular basis within small intervals, voter turnout may be difficult to interpret, although it is easily measurable (Schmitter 2004, 50). This is due to the fact that voters simultaneously select future government mandates and sanction or hold accountable past governmental performance (Fearon 1999, 57).[92]

However, it may be the case that elections are first and foremost understood as a selection problem rather than a sanctioning mechanism for incumbent politicians (Fearon 1999, 82). In addition, the sanctioning mechanism of elections cannot work, if politicians have already reached their term limits (Fearon 1999, 61; Lauth 2004, 92). Put differently, term limits decrease the impact and the effect of electoral accountability. However, if elections really were the ultimate instrument of accountability, politicians would change their behavior significantly during their last term. Nonetheless, empirical reality seems to militate against the existence of substantial "last-period effects" (Fearon 1999, 63-4). As a result, accountability may play only a minimal role in the frame of elections.

Besides, there are numerous other difficulties related to the concept of vertical accountability. For instance, politicians normally obtain a significant informational advantage over citizens, providing them with a discretionary leeway which allows them to circumvent the mechanism of vertical accountability (Ferejohn 1999, 132; Fearon 1999, 55).[93] Other reasons for the difficulty of assessing the degree of accountability include the fact that active citizens may choose alternative and unconventional modes of participation (Schmitter 2004, 55). Their initial active participation, however, may not necessarily coincide with subsequent policy conformity (Schmitter 2004, 55). In addition, citizens may hold politicians accountable for inconvenient, but necessary long-term reforms (Schmitter 2004, 56).

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[92] See Fig. 6: Voter's Time Perspective, 39
[93] Especially in economic science this effect if often referred to as the principal-agent problem. In this case the citizens represent the principal, whereas the politicians act as their agents.

Finally, political representatives may truly believe that they were acting in the best interest of the citizens, although they are not (Schmitter 2004, 56). Analogously, citizens' believes, attitudes, and preferences may not be stable over time, which equally undermines the definiteness of electoral accountability (Schmitter 2004, 56).

3.2.5 Participation

Another dimension, which is fundamental to the idea of democracy, especially for procedural conceptions, is participation (Deth 2006, 168). It emphasizes the need that all adults are equally entitled to take part in the decision-making process (Diamond/Morlino 2004, 23). [94] In this context, participation presupposes political equality in order to be really democratic (Diamond/Morlino 2004, 24).[95] This implies that measuring participation always includes the latent measuring of political and thus civil rights, too (Lauth 2004, 68).

Furthermore, participation rests upon four elements. Firstly, it emphasizes the role of the citizen as the primary agent. Secondly, it requires activity of the citizens in order to be effective. Thirdly, this activity rests on a voluntary basis. And finally, political participation is logically oriented towards governmental action (Deth 2006, 170-1).

Therefore, the primary indicator for measuring participation are elections, through which the public selects political representatives and thus influences policy decisions (Parry/Moyser 1994, 48; Powell 2000, 3). Although elections do serve as the major indicator, recent scientific research additionally focuses on alternative modes of participation, as well (Deth 2006, 168). For instance, campaigning, contacting politicians, organizing protests and demonstrations, lobbying, or assembling, as instruments of a lively civil society, may serve as more significant and more valid indicators for participation, hence questioning the exclusive focus on election processes (Parry/Moyser 1994, 46; Diamond/Morlino 2004, 23).

By tendency, a society demands for a higher number of participation alternatives, the more heterogeneous it is (Abromeit 2001, 21). Conversely, the more homogeneous a society is, the higher is the probability that elections and its inherent majority rule are perceived to be fair (Abromeit 2001, 20; Abromeit 2004, 85). Put more generally, the variety of participation alternatives may be viewed as a function of the actual context-

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[94] „Politische Partizipation kann lose als bürgerliche Beteiligung mit dem Ziel der Einflussnahme auf politische Entscheidungen definiert werden." (Deth 2006, 169)

[95] See 3.1.2 Equality, 32

specific circumstances (Abromeit 2004, 82). The quality of democracy in terms of participation could be measured according to supply and demand for diverse modes of participation (Abromeit 2004, 87). This approach, however, poses serious challenges concerning operationalization and comparability due to the focus on context-specificity (Abromeit 2004, 90-1).[96]

However, taking into account alternative modes of participation is subject to some obstacles, as well. On the one hand, it may be difficult to properly distinguish between political and nonpolitical activities. This is especially due to the blurring boundaries between the public and the private sphere, or put differently, the politicization of the private sphere (Deth 2006, 180-1). In consideration of this phenomenon, problems of operationalization and valid measurement of these modes of participation may arise.

On the other hand, alternative participatory forms are normally exercised only by a small minority of the population, especially in comparison with elections (Deth 2006, 182-3; Parry/Moyser 1994, 50). This, in turn, may serve as a justification for relying on elections as the primary participatory indicator in the frame of evaluating the quality of democracy.[97]

Either way, participation heavily depends on information, which, in turn, depends on transparency (Lauth 2004, 73). Citizens must have access to multiple and alternative sources of information. Otherwise, the conditions for effectively working participation could not be met. Of course, this independent information processing ability also depends on minimum levels of human development, because resource endowment influences the extent of participation to a non-negligible degree (Diamond/Morlino 2004, 24; Deth 2006, 184).

Besides, the scope of participation remains a controversial issue in the assessment of democratic quality. The question arises, if higher levels of participation coincide with higher levels of quality of democracy (Lauth 2004, 74; Abromeit 2004, 79). This question may be hard to answer due to the fact that it may be difficult to correctly interpret low levels of participation (Lauth 2004, 75). In acknowledging that protest and rejection may equally represent legitimate expressions of political participation, the attempt of equating high participatory levels with high levels of democratic quality delivers elusive results (Deth 2006, 172; Lauth 2004, 75).

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[96] See 2.3.2 Universalism vs. Cultural Relativism, 18
[97] See 6.1.3 Operationalization of Vanhanen's Index of Democratization, 79

Finally, participation requires two important aspects, notably representativeness as well as responsiveness (Parry/Moyser 1994, 57). Representativeness refers to the degree to which active participants simultaneously represent inactive citizens (Parry/Moyser 1994, 57). Besides, responsiveness refers to the relationship between citizens and its political leaders, as without responsiveness, representation would be useless (Parry/Moyser 1994, 58).[98] Similarly, participation requires strong legislatures in order to transform popular will in concrete policy outcomes (Fish 2006, 18).

3.2.6   Competition

Apart from participation, competition serves as the other major procedural democracy dimension. It refers to free, recurring, and fair elections with a real choice between differing political parties (Diamond/Morlino 2004, 24). Competition also emphasizes the need for meaningful elections (Diamond/Morlino 2004, 24). Otherwise, competition as well as participation would lose their effectiveness.

Clearly, competition presupposes the existence and protected guarantee of political and civil rights (Diamond/Morlino 2004, 24). As a consequence, if competition is measured in the frame of evaluating the quality of democracy, political and civil rights are immanently measured, as well (Lauth 2004, 68).[99] This aspect is important when taking into account the potential double measurement concerning the obvious as well as the latent weighting of the various dimensions in a liberal, procedural democracy conception.[100]

Related to the question of basic civil and political rights, effectively working competition requires the fair access to the media for all political parties (Diamond/Morlino 2004, 24). In this context, concentrated media ownership structures counteract this goal. In addition, there is a need for independent courts, which guarantee basic framework conditions for political competition, as well as the avoidance of extreme inequalities in economic and political resources (Diamond/Morlino 2004, 25). This condition is due to the fact that economic resources may correlate with political influence to a substantial degree.

Analogical to other democracy dimensions, there are also some challenges involved related to the measurement of competition. For instance, competition and

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[98]   See 3.2.3 Responsiveness, 36
[99]   See 5.3.2 Dimensions and Methodology, 69
[100]   See 2.4 Assessing the Concept Quality of Democracy Indices, 26

competitiveness are often equated (Bogaards 2007, 1232). The latter one refers to the actual election outcomes, whereas competition rather emphasizes the pre-election phase. So, competitiveness could be low, although competition may have been intense (Bogaards 2007, 1232).[101]

Another obstacle in evaluating competition is the relationship between competitiveness and democracy (Bogaards 2007, 1231). It may be possible that an overwhelming victory of a party truly reflects the citizens' preferences, and thus not automatically represent distorted election results by the incumbent political elite. Put differently, if competitiveness, i.e. election results, are taken as the only reference for the competitive dimension of democracy, an overwhelming share of votes for one party may be perceived undemocratic (Bogaards 2007, 1232). This in turn, may simply be incorrect.[102] Finally, countries featuring a two-party system would rate systematically worse under such a perception of competition (Bogaards 2007, 1231).[103]

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[101] See 5.3.2 Dimensions and Methodology, 69
[102] This problem especially arises within the African context, where election results are often more extreme as compared with Western democracies. (Bogaards 2007, 1227)
[103] See 5.3.3 Concept Validation, 71

4 Conceptualization of the QD-Index

After having discussed fundamental principles and constituent dimensions of democratic quality, this chapter will deal with the theoretical conceptualization of the QDI. Bearing in mind the great variety of alternative democracy measurement concepts, there will be an attempt to develop an integrative framework, which realistically reflects the interrelations between the actual democracy dimensions. The QDI should ideally permit the differentiated assessment of quality of democracy, while guaranteeing the balance between conceptual relevance and economicalness.[104]

The QDI aims at covering all three fundamental democracy principles; freedom, equality, and control. While the former two principles are mostly incorporated within current democracy evaluation conceptions, the control dimension remains disproportionately unconsidered. Nonetheless, control represents an integral part of functioning democracies, because it acts as a regulatory force for the otherwise unlimited sovereign rule of the people. That is why the QDI attempts to eliminate this deficiency and thus to contribute to a more valid evaluation of democratic quality, which is schematically illustrated in figure 8.

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[104] See 2.4.2 Approach by Müller/Pickel (2007), 28
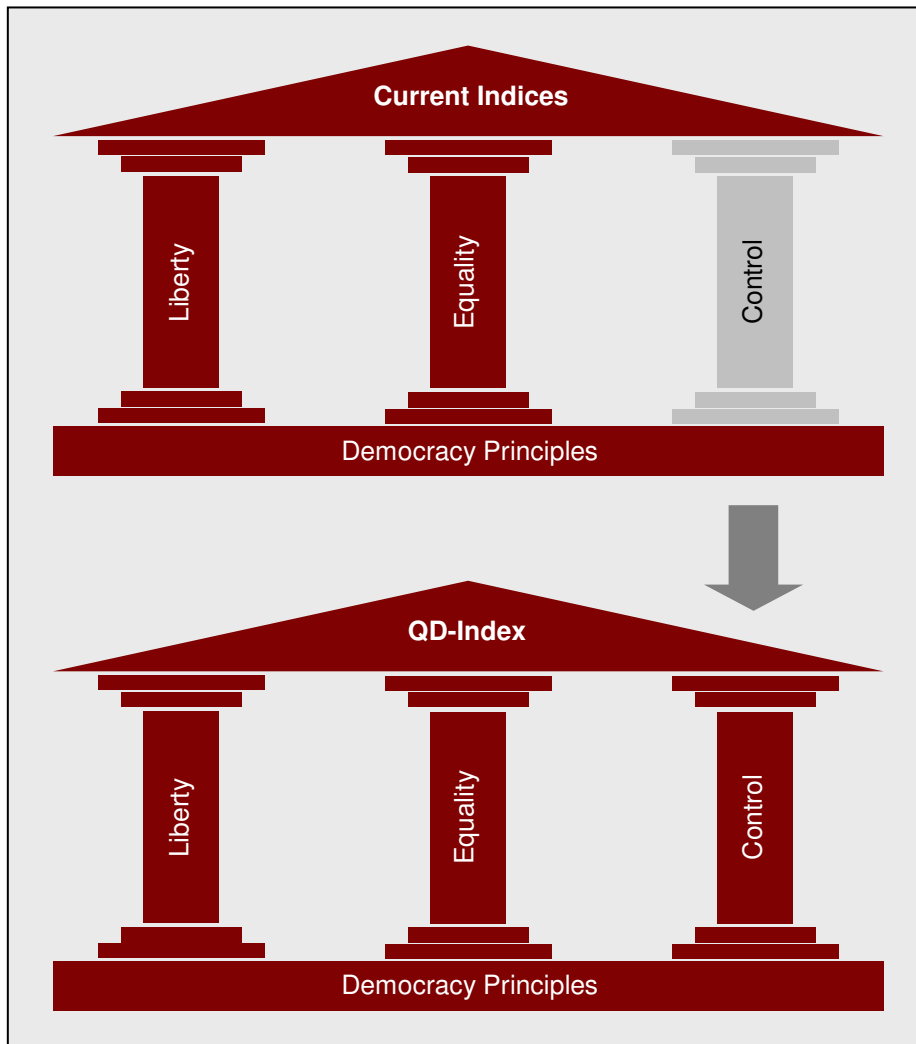
Fig. 8: Democracy Principles in Current Indices vs. QD-Index
(Source: Own illustration)

Concerning equality, the QDI focuses on political input rather than output equality, which corresponds with the general tenor of the thesis of measuring political democracy rather than more comprehensive, maximalist conceptions.[105] Put differently, the QDI emphasizes political democracy from an institutional and procedural perspective, thus negating performance-oriented democracy conceptualizations. All in all, the QDI follows a multidimensional approach in order to correspond to the multidimensional nature of democracy. The complex interrelations between the dimensions, which are integrated in the QDI, are schematically illustrated figure 9 in order to facilitate the line of argument.

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[105] See 2.3.1 Minimalist vs. Maximalist Democracy Concepts, 17
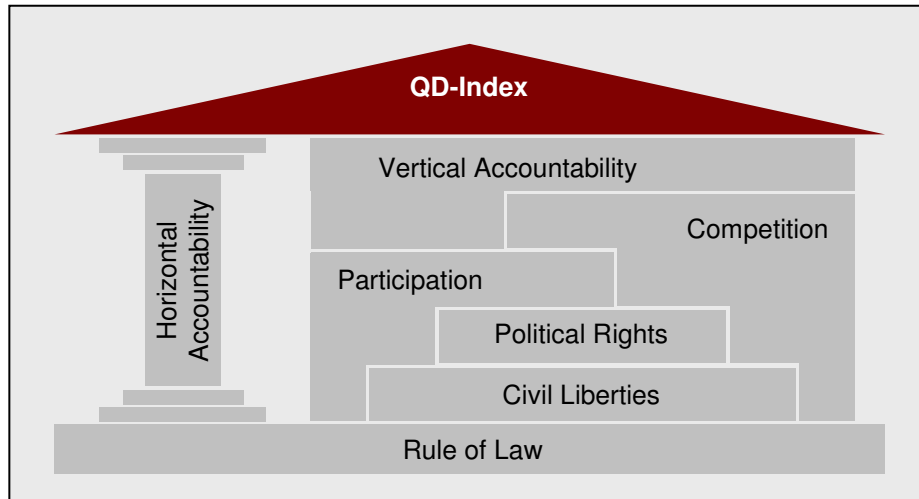
Fig. 9: Conceptualization of the QD-Index[106]
(Source: Own illustration)

The most fundamental dimension, of course, is the rule of law. It serves as the basis for all the other democracy dimensions. The rule of law is the sine qua non for democracy, which means that political regimes cannot qualify as democratic, as long as they do not deliver minimum levels of rule of law. It serves as the foundation for horizontal and vertical accountability as well as the guarantee of civil liberties and political rights. Of course, participation and competition heavily depend on the functioning of the rule of law in order to work effectively. Due to this immanent importance, the dimension "rule of law" also represents the basis of the QDI, on which the other QDI dimensions build on.

Based on this dimension, civil as well as political rights, serve as the second focal point of the QDI. As has already been outlined above, social rights are excluded from the model and thus as a factor of country evaluation, as they do not necessarily coincide with the concept of political democracy.[107]

Rights represent the basis for the proper functioning of competition and participation, as well as vertical accountability and responsiveness. The theoretical focus of the civil liberties' dimension within the QDI lies on negative liberties, which manifest freedom against the state, rather than positive civil rights, which deal with the right to employment and personal welfare. In this context, civil rights or liberties themselves

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[106] The size and shape of the different dimensions, as illustrated in figure 9, are of no specific significance in terms of weighting, superiority or importance. The figure should simply stress the interrelatedness among the various democracy dimensions for illustrative purposes.
[107] See 2.3.1 Minimalist vs. Maximalist Democracy Concepts, 17

serve as the bases for political rights, because many political rights could not be practically executed unless there is a minimum guarantee of civil liberties.[108] On the other hand, political rights equally form a precondition for democracy dimensions, such as participation, competition and thus also vertical accountability.

Apart from the rule of law as well as civil and political rights, responsiveness represents another important element for democratic quality. However, responsiveness as a dimension is not incorporated into the QDI. Though the theoretical and practical problems concerning this dimension have been outlined above[109], some of the most decisive reasons for omitting responsiveness in the model will be recapitulated. Firstly, the people's preference structures are hard to aggregate, may also be unstable over time and contradictory in terms of short-term vs. long-term perspective. Secondly, exogenous factors may influence governmental performance and distort their effective results. These aspects undermine all democracy conceptions that follow an output-oriented approach. Finally, perfect responsiveness endangers the freedom of minorities, thus questioning the whole idea of democracy and democratic quality.

Based on the foundation of effective rule of law, political and civil rights, two other dimensions are incorporated into the QDI, notably participation and competition. Participation represents one of the most genuine elements of democracy, especially regarding procedural conceptions. Though there might be difficulties in correctly interpreting specific levels of participation, as they may not always serve as the correct indicator for a country's democratic quality, participation as a dimension remains too important to be neglected in democracy evaluation concepts.

The latter dimension, competition, also refers to a procedural conception of democracy. Similar to participation, it presupposes the guarantee of the rule of law, political and civil rights. As is indicated in figure 9, it also depends on participation, because without it, competition would lose its effectiveness and significance for democratic quality. Of course, competition depends on the avoidance of extreme inequalities in economic and political resources in order to reflect democratic quality potential. Conversely, low levels of competition may not necessarily signify the abuse of political power and resources and thus a low quality of democracy. Nonetheless, competition remains vital to the idea of democratic quality irrespective of the actual indicator measuring this dimension. Consequently, it is incorporated in the conceptual setup of the QDI.

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[108] See 3.2.2 Rights, 34
[109] 3.2.3 Responsiveness, 36

Although responsiveness as a dimension has been omitted, the QDI focuses on accountability, notably vertical as well as horizontal accountability. The first one is incorporated into the model, because it comprises a bottom-up element of democracy, from citizens to their political representatives. Besides, effective vertical accountability presupposes fair and equal elections, as it entails a relationship between unequals in power. Consequently, vertical accountability implies the effective working of the rule of law, the free exercise of civil and political rights and, thus also, meaningful levels of participation and competition. Similar to the theoretical problems of responsiveness, there may be exogenous factors influencing governmental performance and distorting vertical accountability. However, it is incorporated into the QDI due to its procedural characteristics.

The final dimension of democratic quality covered by the QDI is horizontal accountability. This is due to the fact that horizontal accountability relates to the control principle of democracy, as it represents the system of "checks and balances" within a democratic regime. It prevents the abuse of political power and resources and thus is vital to the very existence of democratic quality. In order to fulfill this task, horizontal accountability heavily depends on the effective working of the rule of law. As such, it does not necessarily interact with the other democracy dimensions incorporated in the QDI, which is graphically illustrated in figure 9.

5 Selected Democracy Indices

After having discussed the major principles and elements of democracy as well as after having conceptualized the QDI from a theoretical perspective, this chapter will present three selected current democracy indices, notably Worldwide Governance Indicators provided by the World Bank, Freedom House and Vanhanen's ID. These three indices have been chosen due to three important reasons: Firstly, they are published on an annual basis. Secondly, their data sets are easily accessible via the internet and finally, they are compatible with the theoretical construct of the QDI.[110]

5.1 Worldwide Governance Indicators

The first section of the chapter deals with the Worldwide Governance Indicators (WGI), which are released by the World Bank. After having discussed the background, the dimensions, as well as the methodology, the WGI will be analyzed regarding their conceptual quality. Finally, the transferability of the WGI to the QDI will be highlighted.

5.1.1 Background and Development

As the name implies, the WGI do not measure democracy per se, but rather governance on a global scale. Concretely, the WGI comprise analyses of 212 countries and territories (Kaufmann et al. 2008, 4). Thereby, the research utilizes a generally broad definition of governance, which reads as follows (Kaufmann et al. 2008, 7):

> *"We define governance broadly as the traditions and institutions by which authority in a country is exercised. This includes the process by which governments are selected, monitored and replaced; the capacity of the government to effectively formulate and implement sound policies; and the respect of citizens and the state for the institutions that govern economic and social interactions among them."*

The WGI are issued on a biannual basis since 1996 and annually for the period between 2002 and 2007 (Kaufmann et al. 2008, 1). In the course of the actualization of the WGI publications, the number of data sources increased significantly. The most

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[110] Vanhanen's ID constitutes an exception, as relevant online data is accessible only until 2001. As a result, the index will be replicated for 2006 within this thesis.
See 6.1.3 Operationalization of Vanhanen's Index of Democratization, 79

recent WGI edition, *"Governance Matters VII"*, comprises 35 sources from 32 different organizations (Kaufmann et al. 2008, 1). These organizations include firms, commercial risk rating agencies, multilateral aid agencies, and public as well as non-governmental organizations (Kaufmann et al. 2007a, 4; Kaufmann et al. 2008, 3).[111] As there have been data revisions in the course of the years, the most recent WGI edition replaces precedent publications (Kaufmann et al. 2008, 6).[112]

5.1.2 Dimensions and Methodology

As has already been mentioned, the WGI measure governance, rather than democracy, although there are some overlaps. In this context, the WGI consist of six aggregate governance measures, notably voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law, as well as control of corruption (Kaufmann et al. 2008, 7-8).[113] However, the WGI do not directly measure governance, but rather process perceptions of governance, thus processing subjective data (Kaufmann et al. 2007a, 4; Kaufmann et al. 2004, 19).[114]

The WGI employ a statistical methodology named *unobserved components model* (Kaufmann et al. 2007a, 4). It allows for the rescaling of individual data sources from 0 to 1 and the aggregation of these sources into the six aggregated indicators by using weighted averages of the constituent data sources (Kaufmann et al. 2007a, 4-6). The unobserved components model implicates the assumption that all individual sources measure governance only to some extent, because all measures suffer from a certain degree of bias and imprecision (Kaufmann et al. 2007a, 11). The actual weight is assigned to a data source depending on its relative preciseness of measuring governance expressed by the correlation coefficient, as compared with the other data sources (Kaufmann et al. 2007a, 11).[115]

The main advantage of the WGI methodology consists of the fact that the aggregate indicators are more precise and provide more meaningful information about

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[111] See Appendix C. Worldwide Governance Indicators - Data Sources 2007, 113

[112] It is for this reason why the most recent update of the WGI data sets (Kaufmann et al. 2008) will be utilized for the operationalization of the QDI, although 2006 remains the year under consideration.

[113] See Appendix B. Worldwide Governance Indicators - Definitions, 112

[114] The utilization of subjective, perception-based data is justified by the fact that most of the data can not be collected via public channels, such as data concerning corruption (Kaufmann et al. 2004, 19). Nonetheless, the authors admit that there are problems involved when dealing with subjective measures (Kaufmann et al. 2004, 21).

[115] Although this methodology may seem complex, the WGI authors underline that there is no substantial change in results, if simple averages of the data sources are processed (Kaufmann et al. 2007a, 11).

governance than individual data sources (Kaufmann et al. 2007a, 11). Additionally, the unobserved components model produces margins of error, which underline the fact that country assessments always imply some degree of imprecision (Kaufmann et al. 2007a, 4; Kaufmann et al. 2008, 5).[116] This standard error declines steadily, as more and more data sources are incorporated in the governance measures since the first WGI publication in 1996 (Kaufmann et al. 2008, 4; Munck/Verkuilen 2002, 1).[117]

5.1.3 Concept Validation

This section of the chapter analyzes the concept quality of the WGI by utilizing the concept validation approach proposed by Müller/Pickel (2007), which has been presented in the second chapter.[118] Consequently, the Worldwide Governance indicators will be assessed regarding the three major challenges in index construction, i.e. conceptualization, measurement, as well as aggregation.[119] A summary of the subsequent analytical deliberations is illustrated in figure 10.

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[116] For instance, the WGI authors reject the idea of identifying the ten best and worst rating countries regarding governance issues, as this attempt simply remains of little relevance (Kaufmann et al. 2008, 5).

[117] For a more detailed explanation of the WGI methodology please refer to Kaufmann et al. (2004, 7-11).

[118] See 2.4.2 Approach by Müller/Pickel (2007), 28

[119] As contrasted with the other two indices, that will be presented subsequently, there is not much reception yet of the WGI within the scientific literature of empirical democracy research. As a result, most of the following deliberations stem from the author of this thesis.
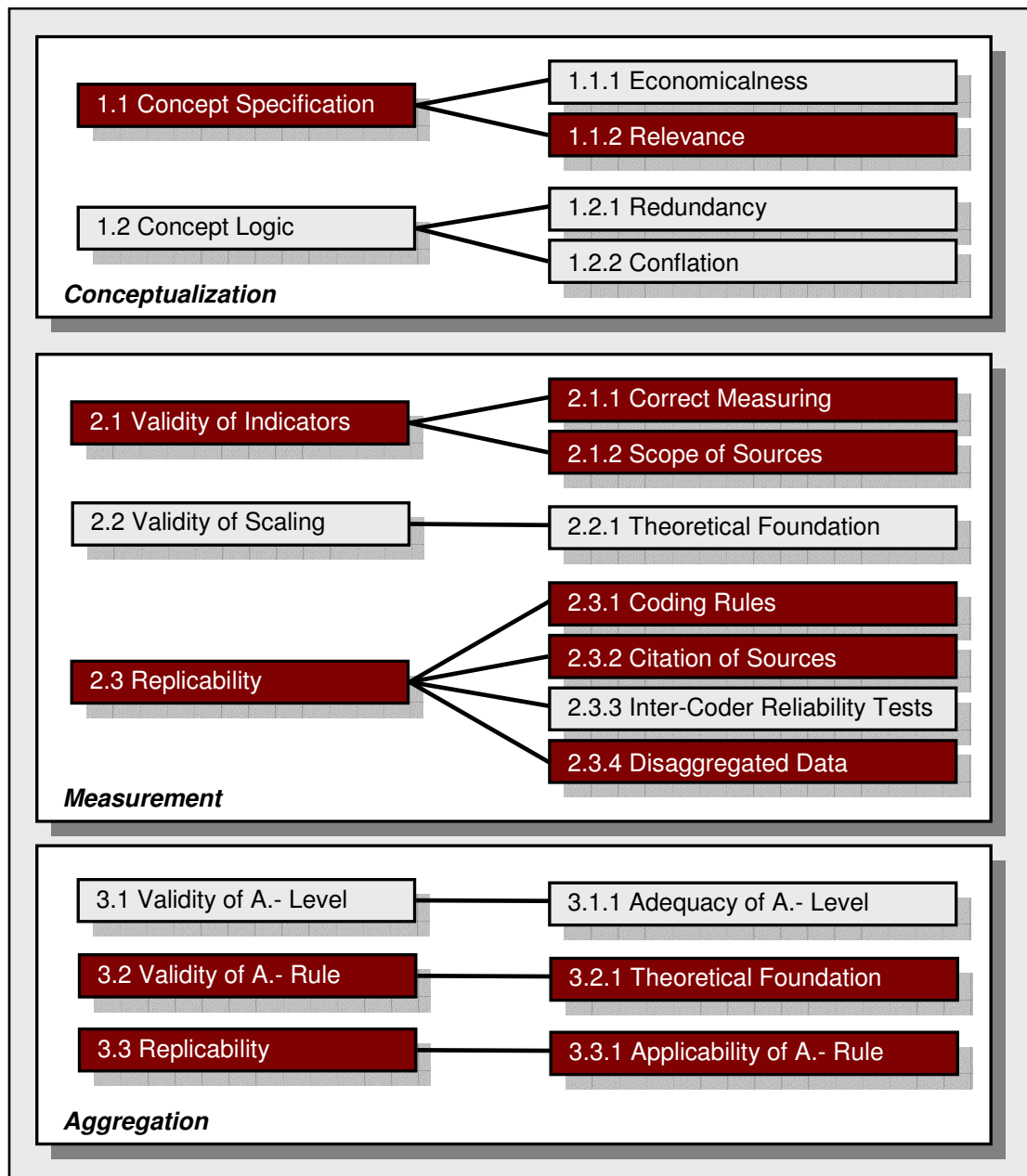
Fig. 10: Concept Validation of Worldwide Governance Indicators
(Source: Own illustration following Müller/Pickel 2007, 520-3)

5.1.3.1 Conceptualization

Regarding *economicalness (1.1.1)* the WGI rate ambiguously. Similar to the concept of democracy, governance is an extremely complex scientific issue. Consequently, utilizing six indicators to evaluate governance seems justifiable. On the other hand, the WGI integrates indicators that do not necessarily coincide with governance alone. For instance, "voice and accountability" is rather related to the concept of democracy, not governance.[120] Additionally, it is the only indicator which incorporates a clear bottom-up character as compared with the other five indicators. Finally, the concept of

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[120] See 2.3.1 Minimalist vs. Maximalist Democracy Concepts, 17

governance is very much related to an output-oriented approach, which definitively contrasts with the "voice and accountability" indicator.

Due to the fact that this thesis focuses on the concept of democratic quality, it is not of peculiar interest whether the WGI fulfills the criterion of conceptual *relevance (1.1.2)* regarding the measurement of governance. However, the most important aspects seem to be covered via the indicators "political stability and absence of violence", "government effectiveness", "regulatory quality", as well as "control of corruption".

Although the WGI deal with relevant criteria, some of the indicators suffer from *redundancy (1.2.1)* to some degree. For example, "government effectiveness" indirectly correlates with "control of corruption". Put differently, real government effectiveness seems unlikely achievable unless corruption remains at minimum levels. Secondly, there are theoretical overlaps between the two indicators "government effectiveness" and "regulatory quality", as both of them focus on very similar issues. This in turn may lead to an inherent double measurement of specific governance attributes.

Related with the problem of redundancy is the problem of *conflation (1.2.2)*, which is predominantly due to the fact that the indicators partly feature low discriminatory power. The WGI authors admit that their concept suffers from low discriminant validity. However, they counter that in the frame of governance assessments the accomplishment of this type of validity does not render qualitative improvements, as they believe their indicators to be too interrelated to be theoretically separated from each other (Kaufmann et al. 2007b, 25).

5.1.3.2 Measurement

The variable of *correct measuring (2.1.1)* cannot be properly assessed, because the WGI do not genuinely conduct measurements, but aggregates already existing governance measures instead.[121] The WGI authors admit that there may be some ideological biases within the data sources processed, but they deem this effect to have only limited impact on the overall results (Kaufmann et al. 2004, 22-3; Kaufmann et al. 2008, 5). In addition, the WGI explicitly cites the margins of error resulting from the statistical methodology, which underlines the attempt to aggregate the individual data sources as precisely and transparently as possible (Kaufmann et al. 2007a, 2; Kaufmann et al. 2008, 2).

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[121] See 2.3.9 Index Combination, 25

As has already been mentioned above, the latest edition of the WGI processed 35 data sources from 32 different organizations. Consequently, the index definitively fulfils the criterion *scope of sources (2.1.2)*.[122] Indeed, the broad scope of sources is one of the core strengths of the WGI, as it allows for the comparative assessment of a huge amount of countries that do not necessarily base on the same data sources (Kaufmann et al. 2007a, 17; Kaufmann et al. 2007b, 6). In addition, this broad scope of sources enables a more precise measurement than individual sources (Kaufmann et al. 2004, 7; Kaufmann et al. 2007a, 14).

Concerning the *theoretical foundation (2.2.1)* of scaling, the WGI publications provide only little information.[123] On the one hand, the scaling is preset by operational necessities, as the individual sources have to be rescaled for aggregation purposes. On the other hand, the WGI only allow for the comparison of countries in terms of their relative positions over time, not in terms of absolute changes, because world averages of governance are zero in each period (Kaufmann et al. 2004, 11; Kaufmann et al. 2007a, 21).

Due to the specificity of the WGI, notably the rescaling and processing of already existing governance and democracy data sources, there is no need for own *coding rules (2.3.1)*. Apart from this, the WGI absolutely fulfill the criterion *citation of sources (2.3.2)*, as there is a complete documentation of the actual sources processed for each of the six governance indicators. This transparency equally represents a substantial advantage of the WGI as compared with alternative governance and democracy measures. However, there is no indication about *inter-coder reliability tests (2.3.3.)* between the three editors of the WGI publications. Equivalent to the citation of sources, *disaggregated data (2.3.4)* is publicized in a transparent manner, especially since the WGI edition in 2006 (Kaufmann et al. 2008, 10).

5.1.3.3 Aggregation

Concerning the *adequacy of the aggregation level (3.1.1)* critics doubt the validity of combining so many different sources due to the potential loss of information and precision. However, the contrary is the case. The WGI aggregation methodology allows for a more precise and more valid depiction of governance on a global scale than any individual source, especially due to the mitigation of potential ideological biases.

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[122] See Appendix C. Worldwide Governance Indicators - Data Sources 2007, 113
[123] See 2.3.5 Scale Construction, 22

Besides, the WGI also feature a *theoretical foundation (3.2.1)* for its aggregation rule. The utilization of the unobserved components model is justified by the fact that individual data sources measure the phenomenon "governance" only to some degree. The aggregation via this specific statistical instrument allows for a more valid measurement convergence to the real governance levels.

Finally, the criterion of *applicability of the aggregation rule (3.3.1)* is almost fulfilled. Clearly, there is a need for elaborate statistical know-how in order to replicate the results delivered by the unobserved components model (Kaufmann et al. 2004, 7-11). In addition, it may be extremely time-consuming to process so many data sources by oneself. Finally, the problem of data availability remains despite the almost complete accessibility of the data sources, because some of them are publicly not available.[124]

5.1.4   Transferability to the QD-Index

After having validated the concept quality of the WGI, this section deals with the transferability of the actual indicators to the QDI. First of all, the QDI is based on a procedural and institutional conception of democracy, while output-oriented approaches have been omitted. As a result, there are several governance indicators that cannot be logically integrated into the QDI conception. Among these indicators are "political stability and absence of violence", "government effectiveness", "regulatory quality", as well as "control of corruption". Although all four of these indicators are important to democracies, other regime types can principally deliver equally high ratings concerning these dimensions with the exception that they do not base upon genuine democratic foundations. Especially, the indicator "political stability and absence of violence" might rank non-democratic countries unproportionally high as compared with other governance indicators.

The first governance indicator, "voice and accountability", generally fits the theoretical tenor of the QDI. The indicator, however, remains too broad, as it simultaneously covers three fundamental dimensions, notably participation, civil liberties, as well as political rights. Put differently, this indicator lacks the necessary discriminatory power in order to depict a differentiated picture of democratic quality. It is for this reason why "voice and accountability" cannot be integrated into the QDI.

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[124] For instance, public disclosure remains insufficient concerning the Country Policy and Institutional Assessment (CPIA) ratings delivered by the World Bank, Asian Development Bank, and the African Development Bank (Kaufmann et al. 2007b, 27).

The only governance indicator that fits the theoretical conceptualization of the QDI is "rule of law", which is illustrated in figure 11. By integrating this indicator, the QDI automatically benefits from one of the core strengths of the WGI, notably the broad scope of sources processed. As a result, the integration of this indicator enables depicting a more valid and more reliable picture of reality concerning the rule of law. In addition, the potential danger of ideological biases of the data sources can be mitigated via the aggregation procedure. To some extent, the WGI represents a meta-index itself, which in turn justifies the general assumption underlying the QDI, notably the usefulness of combining indices in order to generate more reliable and more valid democracy evaluations.
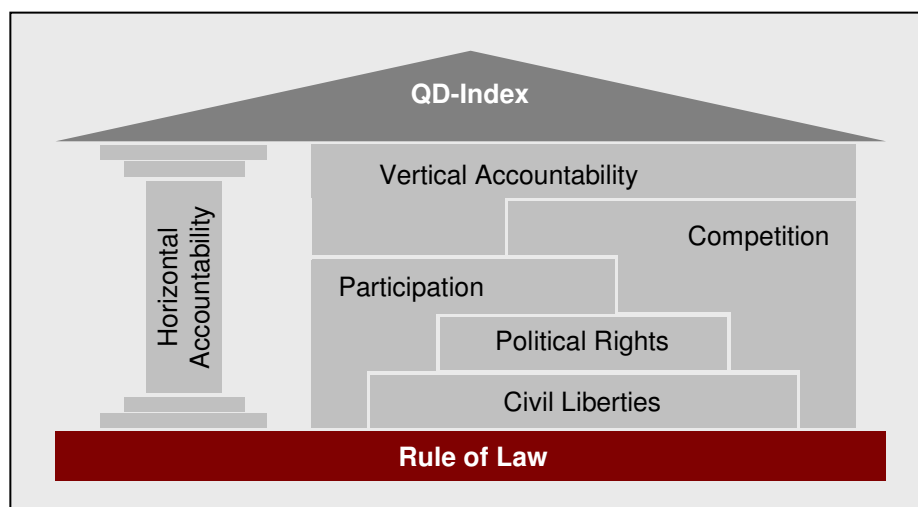
Fig. 11: Integration of the WGI into the QD-Index
(Source: Own illustration)

In addition, the integration of the WGI into the QDI allows for mitigating the problem of data availability, which automatically arises due to the combination of indices that may not always cover all of the same countries.[125] Apart from this practical, concomitant fact, the WGI process governance data despite the fact that there is still no conclusive, commonly accepted definition of governance. However, the WGI authors point out that their research is nonetheless valuable (Kaufmann et al. 2007b, 24-6). Similarly, the attempt of setting up a meta-index of democratic quality, such as the QDI developed in this thesis, underlines the necessity of approaching the concept of democracy despite the persistent lack of an overall and commonly accepted definition of democracy.

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[125] See 2.3.8 Data Availability, 24

5.2 Freedom House

Analogous to the deliberations of the WGI, this section will deal with another important, if not the best-known democracy measure of all, notably Freedom House (FH).[126] After highlighting its background and development, its dimensions and its methodology are explained. The second part of this section comprises the concept validation of FH as well as its transferability to the QDI.

5.2.1 Background and Development

FH was co-founded in 1941 in New York City by Eleanor Roosevelt (FH 2008b). At first, it was aimed to raise awareness for the importance for US-American involvement in World War II in order to confront Nazism (FH 2008b). Similarly, FH opposed the negative developments in terms of freedom and human rights in the realm of Communism during the Cold War (FH 2008b). Since then, FH views itself as a prominent advocate for the spread of democratic values around the world, promoting freedom, human rights and civil liberties on a global scale by conducting comprehensive analyses and engaging in on-site country projects (FH 2008c; 104). FH's mission statement reads as follows (FH 2008c):

> *"Freedom House is an independent nongovernmental organization that supports the expansion of freedom in the world. Freedom is possible only in democratic political systems in which the governments are accountable to their own people; the rule of law prevails; and freedoms of expression, association, and belief, as well as respect for the rights of minorities and women, are guaranteed.*
>
> *Freedom ultimately depends on the actions of committed and courageous men and women. We support nonviolent civic initiatives in societies where freedom is denied or under threat and we stand in opposition to ideas and forces that challenge the right of all people to be free. Freedom House functions as a catalyst for freedom, democracy and the rule of law through its analysis, advocacy and action."*

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[126] Although Freedom House does not explicitly measure democracy, but rather political rights and civil liberties, the index is nonetheless used to evaluate democratic quality. This is also due to the fact, that FH highly correlates with alternative measures of democracy (Lauth 2004, 268).

In 1973 FH's most important publication, *"Freedom in the World"*, was edited for the first time (FH 2008b). Since that year *"Freedom in the World"* has been updated annually, which enables longitudinal country comparisons over more than three decades (Pickel/Pickel 2006b, 215).[127] This represents an enormous comparative advantage as contrasted with alternative democracy measures, which may explain the high popularity of FH within empirical democracy research. More recent publications with particular emphases are *"Freedom of the Press"*, *"Nations in Transit"*, "*Survey of Women's Rights in the Middle East and North Africa"*, *"How Freedom is Won"*, as well as *"Radical Islam's Rules"* (FH 2008b).

5.2.2 Dimensions and Methodology

As has already been mentioned above, FH does not explicitly evaluate democratic quality per se, but rather political and individual freedom and thus important elements of democracy (Pickel/Pickel 2006b, 209). Concretely, FH focuses on political rights and civil liberties (Pickel/Pickel 2006b, 210). The index concentrates on the constitutional reality, rather than the pure institutional design (Schmidt 2000, 409; Pickel/Pickel 2006b, 211). Put differently, Freedom House does not take into account the mere constitutional provision of political and civil rights, but rather the effective implementation and possibility of execution of these rights (Pickel/Pickel 2006b, 210; Gaber 2000, 118; FH 2008a). Conceptually, FH is influenced by the procedural democracy approach of Dahl (1971), which inter alia manifests itself through the emphasis on democratic elections (Pickel/Pickel 2006b, 211; Lauth 2004, 270).

Most recent editions of *"Freedom in the World"* provide extensive analyses, reports and ratings for 193 countries as well as 15 related or disputed territories (FH 2008a). Until 1989 all country analyses were conducted by only one researcher, notably Raymond Gastil (Pickel/Pickel 2006b, 211). Since the end of the Cold War, however, the countries are assessed by a team of scholars and regional experts (FH 2008a). The current report "Freedom in the World 2007" comprises a research team of 29 analysts and 16 so-called senior-level academic advisors (FH 2008a). This outlines the methodological core of FH, because it represents a quasi-objective country rating, which is based on qualitative, subsequently quantified expert judgments (Pickel/Pickel 2006b, 211).[128]

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[127] The provision of longitudinal analyses by democracy indices facilitates the testing of their actual validity as compared with alternative democracy measures (Pickel/Pickel 2006b, 215).
[128] See 2.3.4 Objectivity vs. Subjectivity, 20

The rating process itself proceeds as follows: Both dimensions, political rights and civil liberties, are concreted via a question catalogue, comprising 10 and 15 questions, respectively (FH 2008a).[129] The political rights dimension consists of three sub-categories, notably *"electoral process" (3 questions)*, *"political pluralism and participation" (4)*, as well as *"functioning of government" (3)* (FH 2008a). The civil liberties dimension, by contrast, comprises four sub-categories, named *"freedom of expression and belief" (4 questions)*, *"associational and organizational rights" (3)*, *"rule of law" (4)*, and *"personal autonomy and individual rights" (4)* (FH 2008a). In the course of the three-decades-long country assessment, there have been slight adaptations of the question catalogue, corresponding to the global political change (FH 2008a).[130] Each of the sub-category questions is assigned 0-4 raw points, with 4 indicating the maximum score (FH 2008a). Consequently, a country can rate 40 and 60 points at best concerning the two overall dimensions, political rights and civil liberties (FH 2008a). FH aggregates these two ratings into one overall score from 1 to 7 by simply adding up both political rights and civil liberties scores, indicating a country's general classification as "free", "partly free" or "not free" (FH 2008a). The actual classification intervals can be learned from table 1.

Political Rights Scores	Civil Liberties Scores	Rating
36 – 40	53 – 60	1
30 – 35	44 – 52	2
24 – 29	35 – 43	3
18 – 23	26 – 34	4
12 – 17	17 – 25	5
6 – 11	8 – 16	6
0 – 5	0 – 7	7
Country Status	**Combined Average of the PR and CL Rating**	
Free	1.0 – 2.5	
Partly Free	3.0 – 5.0	
Not Free	5.5 – 7.0	

Tab. 1: Freedom House Key to Scores, Ratings and Status

(Source: FH 2008a, slightly adapted)

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[129] See Appendix E. Freedom House - Checklist Questions and Guidelines, 118

[130] Normally, the time of a country assessment covers a 12-month period. Only "Freedom in the World 2007", which analyses the global freedom status for 2006, covers a 13-month period, ranging from December 1, 2005 until December 31, 2006 (FH 2008a).

5.2.3 Concept Validation

This section of the chapter deals with a thorough concept validation of FH in order to identify its strengths and weaknesses as well as to evaluate its transferability to the QDI. Thereby, the analysis is based on the afore-mentioned concept validation approach by Müller/Pickel 2007. [131] A summary of the following analysis and its validation results is graphically illustrated in figure 12.
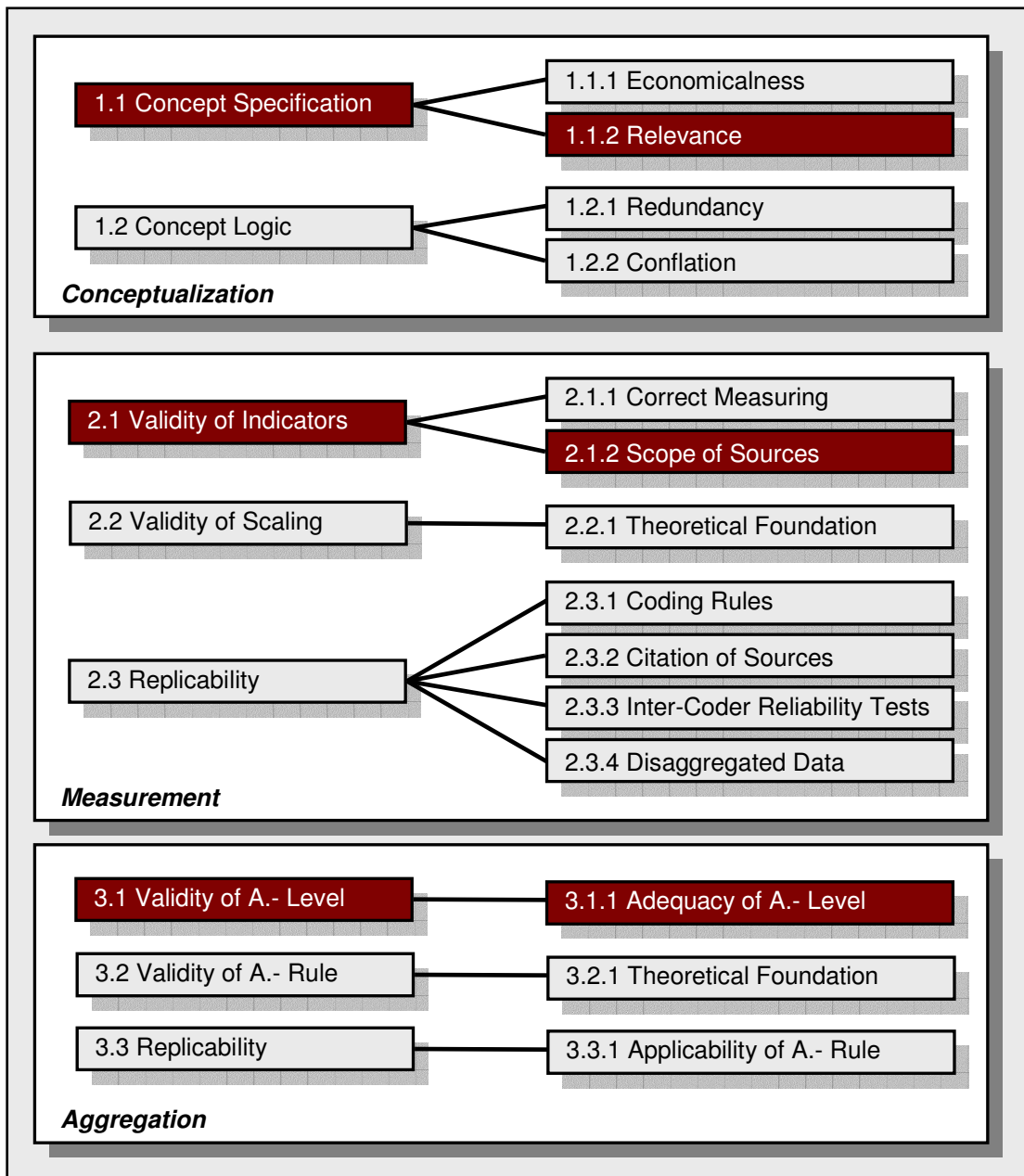
Fig. 12: Concept Validation of Freedom House

(Source: Own illustration following Müller/Pickel 2007, 520-3)

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[131] 2.4.2 Approach by Müller/Pickel (2007), 28

5.2.3.1 Conceptualization

Concerning its conceptual *economicalness (1.1.1)* FH does not rate well (Pickel/Müller 2006, 158). On the one hand the index only consists of the two broad dimensions political rights and civil liberties, which would speak in favor of FH's conceptual economicalness. On the other hand, however, these two dimensions are constructed via an extensive questionnaire, which incorporates many aspects, for instance conducive factors, that do not necessarily coincide with the concept of political democracy (Müller/Pickel 2007, 529; Lauth 2004, 273).[132]

In terms of *relevance (1.1.2)*, FH rates slightly better, because all three democracy principles, notably freedom, equality and control[133], are covered by the conceptual setup (Müller/Pickel 2007, 529). For instance, rule of law and the separation of power are implicitly incorporated into the dimension of civil liberties (Lauth 2000, 57). However, there is only little emphasis on horizontal accountability (Lauth 2004, 273). Unsurprisingly, the questions' relevance is higher in case of the political rights than for the civil liberties (Lauth 2004, 273).

Regarding the *concept logic (1.2)* and its immanent *redundancy (1.2.1)* and *conflation (1.2.2)* FH features some serious flaws, as there are overlapping questions, which in turn lead to double measurements (Pickel/Pickel 2006b, 219; Müller/Pickel 2007, 529). Especially, the discriminatory power between the sub-questions "pluralism", "freedom of opinion" as well as "freedom of organization" remains weak (Pickel/Müller 2006, 159; Müller/Pickel 2007, 529; Lauth 2004, 274).

5.2.3.2 Measurement

As mentioned above, FH's methodological core consists of an extensive set of questions for the various indicators, which lead to implicit double measurements and thus implicit weighting of the dimensions (Pickel/Müller 2006, 159; Pickel/Pickel 2006b, 219). In addition, *correct measuring (2.1.1)* suffers from a culturally biased questionnaire with an inherent normative background (Pickel/Pickel 2006b, 218). Obviously, FH focuses on the U.S. American type of liberal democracy, which systematically underrates democracies with differing normative emphasis due to lacking intercultural equivalence (Pickel/Pickel 2006b, 221; Müller/Pickel 2007, 530).

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[132] See Appendix E. Freedom House - Checklist Questions and Guidelines, 118
[133] 3.1 Principles of Democratic Quality, 31

Nevertheless, one of the core strengths of FH remains the fact that the ratings and country rankings are issued on an annual bias, which enables longitudinal studies (Pickel/Pickel 2006b, 210). This, of course, may be one reason for the above-average popularity of FH as compared with other current democracy indices. This comparative advantage, however, is reduced due to the fact that there have been slight methodological changes and adaptations of the questionnaire over the years, which reduce the validity of longitudinal studies to a substantial degree (Pickel/Pickel 2006b, 219).

As contrasted with the variable of correct measuring, FH rates much better in terms of *scope of sources (2.1.2)*, as it incorporates the findings and results from a diverse and broad pool of information, nationally as well as internationally (Müller/Pickel 2007, 530). In addition, not only "official" data is processed, but also information delivered by NGOs, which delimits the potential bias deriving from governmental institutions (Pickel/Müller 2006, 160).

FH uses ordinal scales to rate and rank countries according two their political rights and civil liberties (Müller/Pickel 2007, 530). Unfortunately, there is no *theoretical foundation (2.2.1)*, which consequently diminishes the *validity of scaling (2.2)* (Pickel/Müller 2006, 160). More concretely, there is neither a theoretical justification for the overall 1-7 scale, which indicates a country's general classification as "free", "partly free" or "not free", nor for the 0-4 scale for each of the sub-questions within the questionnaire.

Similarly, there are numerous flaws concerning the *replicability (2.3)* of the FH scores. For instance, the *coding rules (2.3.1)* are not publicly available. In fact, each expert judgment may be based on an individual coding procedure, which in turn decreases the consistency of the entire research process to a non-negligible degree (Pickel/Müller 2006, 161; Müller/Pickel 2007, 530). Similarly, the *citation of sources (2.1.2)* remains dissatisfactory (Müller/Pickel 2007, 531). Although utilized sources are generally publicized, there is no possibility to identify which specific sources have been gathered in order to set up the actual country ratings (Pickel/Müller 2006, 161; Lauth 2004, 271). In addition, there is no information provided concerning the experts who actually rate a country (Pickel/Pickel 2006b, 221). All in all, the rating process features very low transparency and thus low auditability (Lauth 2004, 270).

The problem of insufficient replicability intensifies, as there is no information regarding *inter-coder reliability tests (2.3.3)*, either (Pickel/Müller 2006, 161; Müller/Pickel 2007, 531). There is simply a serious lack of inter-coder reliability, which in turn also affects the validity of the entire country rating process (Pickel/Pickel 2006b, 219). Finally, FH does not fully publicize its *disaggregated data (2.3.4)* which form the country rankings (Müller/Pickel 2007, 531). Before 2006 there have only been published the overall aggregate scores. Only recently, since the edition of "Freedom in the World 2006" the sub-scores for each battery of questions are additionally cited. The problem, however, remains, as the scores for the individual questions (0-4 points) still remain elusive. To sum it up, there are serious flaws and obstacles related to the methodological replicability of Freedom House.

5.2.3.3 Aggregation

In terms of the last challenge of index construction, notably aggregation, FH only scores slightly better. For instance, the *adequacy of the aggregation level (3.1.1)* is guaranteed, as the index comprises two scales with three typological classifications, "free", "partly free" as well as "not free" (Pickel/Müller 2006, 161). However, problems for aggregation remain, because not all questions are definitely answerable and this fact may change from case to case (Lauth 2004, 271). Not least, the problem of limited reliability in the frame of the rating process hinders consistent aggregation procedures (Lauth 2004, 274).

Similarly, the aggregation rule of FH lacks a sound *theoretical foundation (3.2.1)* (Müller/Pickel 2007, 531). On the contrary, there are no theoretical deliberations concerning the method of scale combination, notably the simple addition of political rights and civil liberties (Pickel/Müller 2006, 162; Pickel/Pickel 2006b, 219). This fact is problematic, because from a theoretical point of view, political rights heavily depend on the guarantee of civil liberties, which makes the latter ones slightly more important.[134] Besides, there are implicit weightings of variables and dimensions due to the afore-mentioned low discriminatory power of some of the questions (Lauth 2004, 271). In addition, the double thresholds concerning the typological classification both on the point level as well as on the scale level[135] contribute to aggregation inconsistencies (Müller/Pickel 2007, 531).

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[134] See 3.2.2 Rights, 34; 2.3.7 Weighting of Dimensions, 23
[135] See Tab. 1: Freedom House Key to Scores, Ratings and Status, 62

Finally, FH provides a mixed picture concerning the *applicability of its aggregation rule (3.3.1)*. Although it is transparently publicized, it cannot be replicated in the frame of an autonomous research effort due to the non-accessibility of the underlying data (Müller/Pickel 2007, 531; Pickel/Müller 2006, 162).

5.2.4 Transferability to the QD-Index

Analogous to the section covering the WGI, this section deals with the transferability of Freedom House to the QDI. Again, the advantages for the integration are discussed first, in the course of which there will be a differentiation between the conceptual as well as the operational implications.

One of the critiques concerning FH is that it only measures freedom, not democracy or democratic quality. This fact, however, simultaneously represents one of the core strengths of a meta-index, such as the QDI, as it enables the integration of FH in an overall democracy measure.[136] As illustrated in figure 13, both dimensions, political rights and civil liberties, can logically be transferred to the QDI.
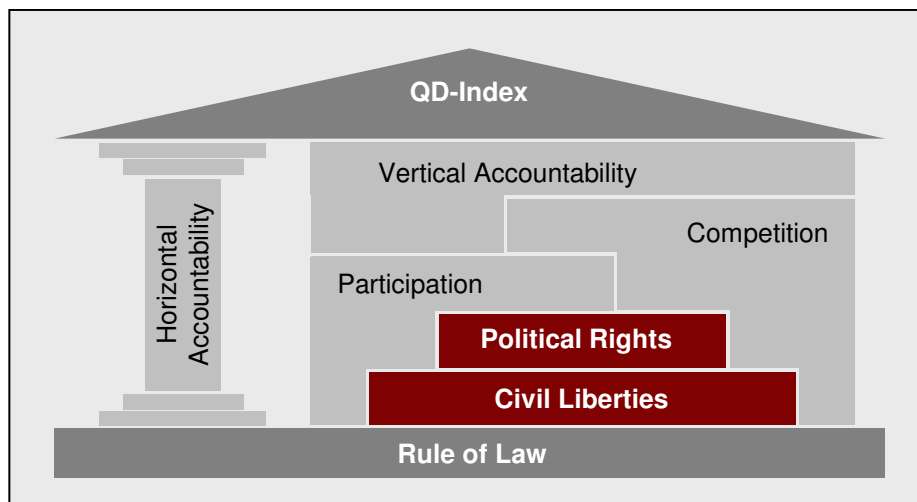
Fig. 13: Integration of Freedom House into the QD-Index
(Source: Own illustration)

Another advantage of integrating FH into the QDI consists of the relatively broad scope of sources, which makes the QDI automatically more reliable. Besides, FH focuses on the constitutional reality, not the mere legal guarantee, which in turn enables the QDI to depict a more realistic picture of a country's situation concerning political rights and civil liberties.

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[136] See 2.3.9 Index Combination, 25

From an operational perspective, FH qualifies for the conceptual design of the QDI, because its analyses are published on an annual basis. In this respect, FH features highly actual data, which can be processed via the QDI. In addition, the index provides analytic coverage for an extensive number of country cases, which mitigates the general problem of missing country data, when combing multiple democracy indices.[137] Besides, FH's most recent publications comprise published sub scores, which allows for their differentiated integration into the QDI.

Additional advantages of transferring the FH index to the QDI stem from the mitigation of flaws in measurement and aggregation.[138] For instance, the problem of the theoretical foundation of scaling need not be taken into account, because the Freedom House scores must be rescaled anyway in order to fit into the overall QDI. Analogously, the problem of the double thresholds becomes obsolete, because there would have to be set new thresholds after all constituent democracy indices have been combined. Finally, the methodological problem of aggregating political rights and civil liberties via mere addition can be omitted due to the fact that other methodological ways of aggregation are chosen on the QDI level.[139]

Nonetheless, some disadvantages regarding FH still remain. For example, the potential ideological bias concerning the ideal of a liberal, American conception of democracy may still impact the overall QDI results. Equally, the problem of low discriminatory power between the two dimensions as well as the consequent flaw of inherent double measurement remains. Finally, the problem of data validity may also pose a serious challenge to the QDI due to the lack of inter-coder reliability tests or the explicit citation of sources for specific country assessments.

5.3 Vanhanen's Index of Democratization

Equivalent to the afore-mentioned indices, WGI and FH, this section analyzes Vanhanen's Index of Democratization (ID) by looking closely at its background, development, dimensions, and methodology. Subsequently, the ID's conceptual quality is critically reviewed of, before its transferability to the QDI is assessed in a final step.

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[137] See 2.3.8 Data Availability, 24
[138] See 5.2.3 Concept Validation 63
[139] See 6.2 Aggregation Methodology of the QD-Index, 82

5.3.1 Background and Development

Tatu Vanhanen is emeritus professor at the University of Tampere as well as at the University of Helsinki (PRIO 2008). Over the last decades he has contributed enormously to the field of empirical democracy research by developing a rather simple index. It represents the only truly quantitative, objective democracy measure within scientific literature. The core strength of Vanhanen's ID is its replicability, because the data required for the index construction is available from different sources, which in turn mitigates the fallacy of subjective judgments to a substantial degree (Vanhanen 2000, 192). Thereby, Vanhanen focuses on longitudinal studies, analyzing democratic developments of countries dating back to the middle of the nineteenth century (Vanhanen 1997; Vanhanen 1990).[140]

The Vanhanen index is grounded on an evolutionary theory of politics (Vanhanen 2003, 25). In this context, Vanhanen refers to a universalistic approach of democracy, as he assumes that the human nature is alike across all human populations (Vanhanen 2003, 49). The aim of the index is to analyze transformational processes within societies by utilizing a theoretical framework of societal power distribution (Vanhanen 2000, 186; Lauth 2004, 246).[141] The evolutionary character manifests itself through the struggle for resources, whereas power serves as transmitting mechanism in the political struggle for these limited resources (Vanhanen 2003, 26-7). Put differently, there is a logic relation between power and political resources (Vanhanen 2003, 27).[142]

5.3.2 Dimensions and Methodology

Regarding the conceptualization of the index, Vanhanen very much refers to Dahl's (1971) conceptions of public contestation and inclusiveness (Vanhanen 2000, 187). Vanhanen utilizes the dimensions "participation" and "competition", each of which is measured by a single indicator, as is illustrated in table 2 (Pickel/Pickel 2006b, 194). This economicalness, in turn, simultaneously represents the strength and weakness of Vanhanen's ID (Lauth 2004, 245).[143] Vanhanen himself justifies this parsimonious

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[140] For obtaining the complete longitudinal datasets please refer to: http://www.prio.no/CSCW/Datasets/Governance/Vanhanens-index-of-democracy/, [DoR: 08.07.2008]

[141] "Consequently, I use 'democracy' to refer to a political system in which ideologically and socially different groups are legally entitled to compete for political power, and in which institutional power holders are elected by the people and are responsible to the people.", (Vanhanen 2000, 185)

[142] "The crucial point in my theoretical argumentation is that the distribution of power resources determines the distribution of political power to a significant extent and that the evolutionary interpretation of politics explains why it must be so.", (Vanhanen 2003, 28)

[143] See 5.3.3 Concept Validation, 71

conceptualization with the problem of data availability for an extensive number of countries in case of too complex democracy conceptualizations (Vanhanen 2000, 185).[144]

Dimension	Indicator	Dem.-Threshold
Participation	Voter Turnout in %	20%
Competition	100% minus largest party share in %	30%
Index of Democratization (ID)	(Part * Comp) * 100	6.0 index points

Tab. 2: Methodology of Vanhanen's Index of Democratization
(Source: Own illustration following Vanhanen 2003, 65)

As can be derived from table 2, minimum thresholds must be attained in order to qualify as democratic (Vanhanen 2000, 193; Lauth 2004, 245).[145] In this context, it is important to note that the participation indicator refers to the entire, not just the enfranchised population. Again, Vanhanen justifies this operationalization with reference to the data availability problem concerning reliable voter registration data (Vanhanen 2000, 189). Additionally, both dimensions are multiplied, which underlines the equal weighting as well as the necessity of both dimensions to be high in order to qualify as democratic. Put differently, compensating low competition results with high participation values, and vice versa, is not feasible (Vanhanen 2003, 64).

With reference to his evolutionary theory of politics, Vanhanen justifies the operationalization of the competition dimension by reasoning that the share of the smaller parties reflects best the real distribution of power (Vanhanen 2000, 186). Analogously, the more people are involved in the struggle for political power, the better. According to Vanhanen this serves as a justification for the operationalization of the participation dimension by drawing on elections as the primary indicator (Vanhanen 2000, 187).

Vanhanen's ID can be processed either on parliamentary or presidential elections or on a combination of both of them (Vanhanen 2003, 58). In this context, Vanhanen defines three different institutional power arrangements, notably parliamentary dominance, executive dominance, as well as concurrent powers (Vanhanen 2000, 190).

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[144] See 2.3.8 Data Availability, 24

[145] Vanhanen applies differing threshold values in the course of his publications. The ones cited in table 2 represent the threshold values of his most recent comprehensive study (Vanhanen 2003).

Concerning the latter power arrangement, there is a weighting of both election types according to their relative importance, 50-50, 25-75, or 75-25 percent (Vanhanen 2003, 59).

Although the two indicators are comparably easy to apply, there still remain some practical difficulties. For instance, parties may be part of an alliance. Consequently, alliance parties are not dealt with separately (Vanhanen 2003, 57). Moreover, the candidate, who won in presidential elections, is considered the largest party regarding the competition indicator (Vanhanen 2003, 57). Generally, only last round elections are taken into account (Vanhanen 2000, 189). And finally, if the selection of political representatives is not based on popular elections, then both dimensions score zero percent (Vanhanen 2003, 58).

Nonetheless, there are some inherent biases concerning the indicators. For example, the competition indicator systematically rates majoritarian electoral systems worse. Vanhanen counters that he sets 70 percent as the upper limit for the competition indicator in order to mitigate this bias (Vanhanen 2000, 191). Similarly, the participation dimension adversely affects the ratings of developing countries, as the entire population figures are taken into account. Vanhanen, however, estimates that this methodological difficulty distorts the validity of results only by about 10 to 15 percent (Vanhanen 2000, 191).

5.3.3 Concept Validation

Analogical to the evaluation of Freedom House, this part of the chapter deals with the concept validation of Vanhanen's ID. Vanhanen himself argues that his concept is parsimonious, well-documented, non-subjective, transparent and flexible (Vanhanen 2003, 77-8). As summarized in figure 14, the following deliberations will constitute a more fine-grained analysis of the concept.
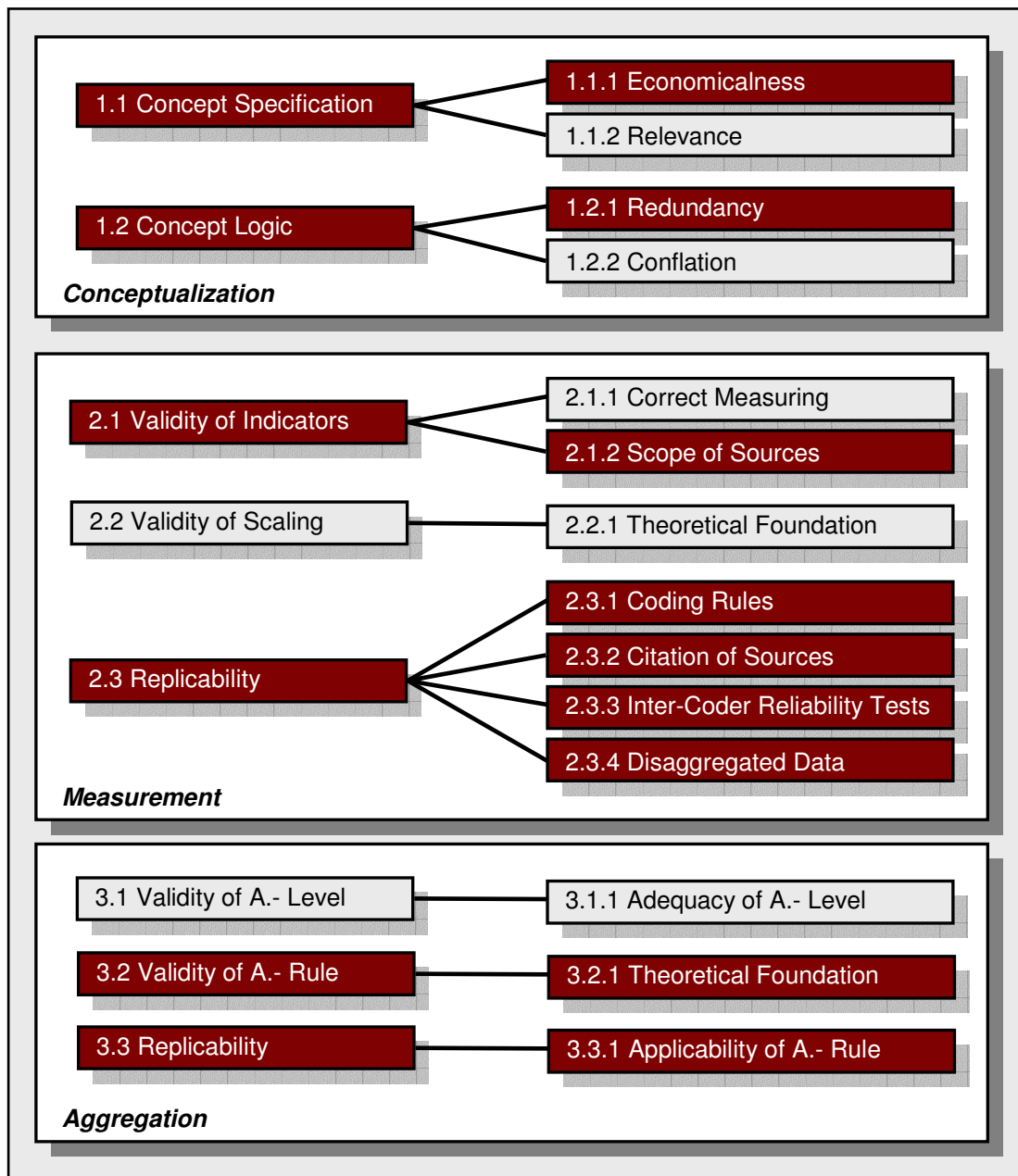
Fig. 14: Concept Validation of Vanhanen's Index of Democratization

(Source: Own illustration following Müller/Pickel 2007, 520-3)

5.3.3.1 Conceptualization

Concerning *economicalness (1.1.1)* Vanhanen's ID is probably the most parsimonious among all democracy indices, as it focuses exclusively on the two dimensions participation and competition (Müller/Pickel 2007, 529). This fact represents its core strength as compared with more complex conceptualizations.[146] Vanhanen disapproves many of the conventional indices due to their complexity and the consequential problem of data availability (Vanhanen 2003, 52).

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[146] See 2.3.1 Minimalist vs. Maximalist Democracy Concepts, 17

However, in terms of *relevance (1.1.2)* the ID also suffers from this apparent strength, because it omits other fundamental democracy dimensions, such as basic human rights, political rights, or the control dimension (Müller/Pickel 2007, 529; Lauth 2006, 94; Lauth 2004, 248; Lauth 2000, 57). Although Vanhanen counters that participation and competition presuppose the existence of these rights to some extent in order to work effectively, the ID's concept still remains a too minimalist approach concerning the differentiated evaluation of democratic quality (Vanhanen 2003, 38).[147] This problem aggravates due to the fact that both dimensions are measured through one indicator each. In fact, critics fault that democracy is simply too complex to be adequately assessed by only two dimensions (Traine 2000, 208).

Related with the evident economicalness Vanhanen's ID features low *redundancy (1.2.1),* which represents another strength of the index (Pickel/Müller 2006, 159; Müller/Pickel 2007, 529). Nonetheless, the ID does not score that strong concerning the variable of *conflation (1.2.2)*, because the dimensions are theoretically overlapping to some degree (Müller/Pickel 2007, 529).

Apart from the critique related to the conceptualization of the ID, the basic theoretical deliberations of his model get criticized, as well. The assumption that the struggle for political power as a means to generate and acquire political resources, which determines the behavior of all human beings, simply represents a meta-physical statement (Traine 2000, 212).[148] This assumption, however, is not falsifiable with means of scientific research. In this sense, Vanhanen's quantitative approach with its inherent focus on "hard data" rather represents a convention, which is somehow misleading and obscuring its normative, subjective basis (Traine 2000, 209).

5.3.3.2 Measurement

One of the core strengths of the Vanhanen's ID is the fact that the indicators are exactly determinable, because voter turnout numbers and relative party shares in terms of either election results or seat distribution in parliaments are relatively unambiguous (Pickel/Pickel 2006b, 196). However, both indicators also tend to be too imprecise concerning *correct measuring (2.1.1)* (Traine 2000, 208).

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[147] Vanhanen refers to the high correlations of his ID and the Freedom House ratings (Lauth 2004, 247).

[148] *"Die Biologie setzt den historischen Rahmen der Demokratie."*, (Traine 2000, 213)

For instance, voter turnout may be subjected to a variety of influencing factors, which may reveal little information with regard to democratic quality (Lauth 2004, 247). Voter turnout may be high due to compulsory suffrage or election fraud. On the other hand, it may be low due to specific weather conditions on election day (Schmidt 2000, 401). In addition, voter turnout as an indicator for participation may be of little value in case of authoritarian regimes without elections compared to totalitarian regimes with pseudo elections (Lauth 2004, 248). Hence, Vanhanen's ID validates the mere execution of elections rather than their respective quality (Lauth 2004, 248). Besides, voter turnout may be subjected to short-term changes without any underlying change in the overall political system and thus with no change in a country's quality of democracy. Although Vanhanen acknowledges the last fact, he still believes that the strengths of the indicators outweigh their shortcomings (Vanhanen 2003, 38).

Besides, the measurement of voter turnout alone does not take into account direct democratic instruments, such as referenda, which underrates countries like Switzerland or the USA (Schmidt 2000, 400-1). That is why Vanhanen incorporated referenda into the participation dimension in the frame of his most recent democratization evaluation (Vanhanen 2003). Finally, the participation indicator within Vanhanen's ID is also distorted by the fact that the actual number of votes is related to a country's entire population for reasons of data availability. As a result, participation levels correlate with the country's age structure, which systematically underrates developing countries and overstates participation levels in industrialized countries (Lauth 2004, 247; Pickel/Pickel 2006b, 197; Schmidt 2000, 401; Pickel/Müller 2006, 160).[149]

The second indicator, competition, equally suffers from non-negligible flaws. The competition dimension scores high in case of a highly fragmented party system. Conversely, the indicator rates countries lower which feature a two-party system (Pickel/Pickel 2006b, 197; Schmidt 2000, 402; Lauth 2004, 247; Müller/Pickel 2007, 530). Due to this substantial bias, which may reveal little information about a country's actual quality of democracy, Vanhanen introduces a cutoff point of 70 percent for the competition indicator. Although this helps to mitigate the bias, it is nonetheless an arbitrary threshold, which cannot be justified theoretically.[150]

As contrasted with the question of correct measuring, Vanhanen's ID rates much better concerning the *scope of sources (2.1.2)*. Due to the fact that Vanhanen uses

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[149] See 5.3.2 Dimensions and Methodology, 69
[150] See 2.3.6 Threshold Problem, 22

quantitative objective data, voter turnouts and seat distributions are relatively easy to find out. Besides, the percentages can be cross-checked by utilizing various sources. One problem, however, remains, notably the fact that both indicators depend on the provision of "official" data, which are often publicized by governmental institutions (O'Donnell 1999, 160; Müller/Pickel 2007, 530). As a result, ID scores may be biased consequential to distorted governmental publications.

Regarding the *validity of scaling (2.2)* and its *theoretical foundation (2.2.1)*, Vanhanen utilizes interval scales, which represents a high-level scale from a statistical perspective, because value differences between countries are hence identifiable.[151] However, Vanhanen does not provide any theoretical justification for its usage (Pickel/Müller 2006, 160; Müller/Pickel 2007, 530).

One of the greatest strengths of Vanhanen's ID surely is its *replicability (2.3)* (Pickel/Pickel 2006b, 197). Firstly, there is no need for *coding rules (2.3.1)*, as the two indicators are externally codified (Pickel/Müller 2006, 161; Müller/Pickel 2007, 530). Secondly, the *citation of sources (2.3.2)* is very transparent (Pickel/Müller 2006, 161; Müller/Pickel 2007, 531). Thirdly and similarly to the coding rules, there is no need for *inter-coder reliability tests (2.3.3)* due to the external codification of the indicators (Pickel/Müller 2006, 161; Müller/Pickel 2007, 531). Finally, the construction of the indicators does not imply the processing of *disaggregated data (2.3.4)*, because the participation and competition percentages already represent aggregated data (Pickel/Müller 2006, 161; Müller/Pickel 2007, 531).

5.3.3.3 Aggregation

In terms of the last challenge, aggregation, Vanhanen's ID provides a mixed picture. Concerning the *adequacy of the aggregation level (3.1.1)* the index combines the two dimensions into one overall score, notably the Index of Democratization (ID). Thereby, cross-sectional and longitudinal comparability is facilitated (Müller/Pickel 2007, 531). However, this approach also entails a substantial loss of information. For instance, two countries could rate equal, although they might feature complementary ratings in terms of participation and competition (Pickel/Müller 2006, 161).

Related with the aggregation level is the problem of arbitrary threshold determination of the indicators (Campbell/Schaller 2002, 199; Gaber 2000, 119; Pickel/Müller 2006, 169). Due to this methodological structure Vanhanen's concept does not seem to be

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[151] See 2.3.5 Scale Construction, 22

apt for evaluating democracy in a differentiated way (Lauth 2004, 249). More concretely, the critical question is why the differentiation between two similarly rated countries from different regime classifications should be more important than a substantial rating gap between two countries within the same regime classification (Lauth 2004, 249). Vanhanen acknowledges this fact, but he counters that there is simply no theoretically justifiable way of consistently determining democracy thresholds, which holds true for all other democracy indices, as well (Vanhanen 2003, 66).[152]

Another strength of the ID is its *validity of aggregation rule (3.2)* and its *theoretical foundation (3.2.1)* (Pickel/Müller 2006, 162). Vanhanen combines the two dimensions via multiplication, because he argues that both of them are equally important. Put differently, there should be no possibility for compensating low ratings of one dimension with high ratings of the other dimension (Müller/Pickel 2007, 531). Hence, the theoretical deliberations are consistently transformed into the construction of the aggregated overall score (Pickel/Pickel 2006b, 195). Finally, the applicability of the *aggregation rule (3.3.1)* is guaranteed, because it is transparent and explicitly cited in the various publications by Vanhanen, which constitutes another advantage of the ID (Müller/Pickel 2007, 531; Pickel/Müller 2006, 161).

5.3.4 Transferability to the QD-Index

Vanhanen's ID covers two fundamental democracy dimensions, participation and competition. These two dimensions perfectly coincide with the theoretical conceptualization of the QDI, which is graphically illustrated in figure 15. The integration of the index also underscores the procedural character of the QDI. From a more practical point of view, the ID features the advantage of relatively easy replicability, which is especially due to its quantitative, objective methodological approach. Consequently, the index may be replicated for any year under consideration with relative ease.[153] In addition, the necessary data for constructing the index is easily accessible and can be cross-checked without any serious difficulties.

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[152] See 2.3.6 Threshold Problem, 22
[153] See 6.1.3 Operationalization of Vanhanen's Index of Democratization, 79
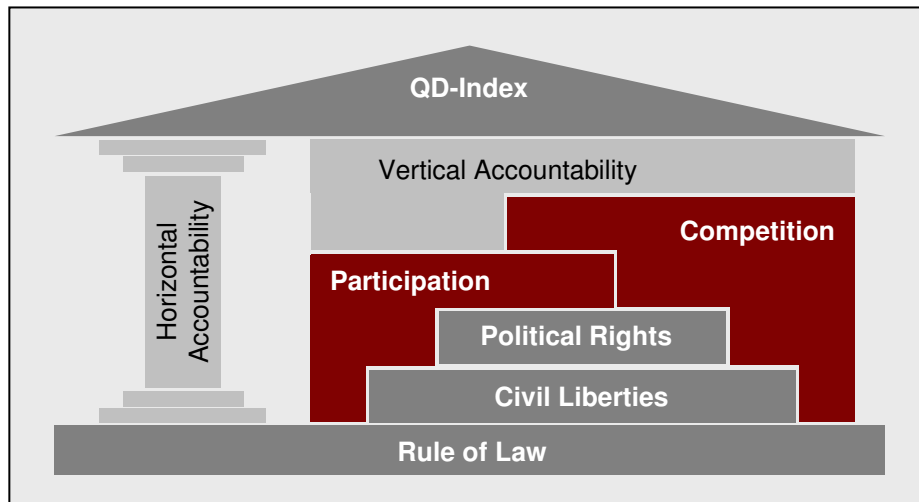
Fig. 15: Integration of Vanhanen' ID into the QD-Index
(Source: Own illustration)

Apart from this, the incorporation of Vanhanen's ID into the QDI delivers additional advantages. For instance, it allows for the mitigation of the obvious theoretical parsimoniousness of Vanhanen's concept. Especially, by separately assessing political rights and civil liberties, much of the scientific critique becomes unfounded (Vanhanen 2003, 60). Additionally, operational flaws concerning the participation indicator (e.g. compulsory suffrage) can be mitigated when explicitly taking into account fundamental rights, as well.

Vanhanen himself admits that the ID is more apt for measuring substantial differences between political systems, than for more sophisticated assessments among democracies or non-democracies (Vanhanen 2003, 64). Consequently, the integration of Vanhanen's ID into a conceptually broader meta-index, such as the QDI, allows for a more detailed evaluation of democratic quality.

Finally, Vanhanen's ID offers the opportunity to conduct longitudinal studies with the QDI. This is due to the fact that the Vanhanen datasets reach back to the middle of the nineteenth century.

6 Operationalization of the QD-Index

The previous chapters dealt with the principles and dimensions of democratic quality, the theoretical deduction of the QDI concept, as well as the analytic evaluation of the concept quality of three current democracy indices and their transferability to the QDI. Subsequently, this chapter focuses on the practical operationalization of the QDI. In a first step, the concrete operationalization of the three constituent indices is commented on, especially concerning their commonalities and adaptations compared to the initial concepts. Secondly, the QDI's aggregation methodology is explained. Thirdly, the country rating and ranking, deriving from the QDI, is presented, before, in a final step, the QDI results are compared to the three constituent indices as well as selected external values by statistical means.

6.1 Transfer of the Constituent Indices

Although the QDI constitutes a meta-index that combines three current democracy indices, they are not integrated into the model without slight adaptations. The need for these operational changes stems from the fact that the indices either do not exclusively measure democracy or are not directly available for 2006.

6.1.1 Operationalization of Worldwide Governance Indicators

The WGI scores represent a normal distribution with a mean of zero and a standard deviation of one, which produces statistical estimates, basically ranging between -2.5 and +2.5 (Kaufmann et al. 2008, 16).[154] Due to the fact that the QDI only processes 167 countries instead of the 212 countries assessed by the WGI, the 2006 estimates must be rescaled. The rescaling will be conducted via a Z-transformation in order to reobtain a normal distribution with a mean of zero and a standard deviation of one and thus to render valuable results for the index combination.[155] Put differently, the country estimates (x-values) are rescaled into z-values, which correspond to specific relative percentage values, in turn representing the results for the "rule of law"-dimension.[156]

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[154] In the course of drafting the diploma thesis, the World Bank has issued an update of the WGI for 2007. Due to the fact that more recent editions supersede previous ones, the updated WGI version is utilized to compute the "rule of law"-dimension for 2006. Websource: http://info.worldbank.org/governance/wgi/resources.htm, [DoR: 09.07.2008]

[155] For analogous rescaling of the WGI for 2002 please refer to (Lauth (2006).
See 6.2.1 Z-Transformation, 83

[156] See Appendix D. Worldwide Governance Indicators – Operationalization for 2006, 114

Although the WGI authors highly recommend also taking into account the standard errors for country evaluation, the standard deviations will be omitted within the QDI construction, as they cannot be incorporated methodologically (Kaufmann et al. 2007b, 12).

6.1.2   Operationalization of Freedom House

Firstly, it is important to draw on the correct data when working with FH publications, because the editions of *"Freedom in the World"* always refer to the previous year. For instance, the FH data which is processed within this thesis for the year 2006 stems from the publication *"Freedom in the World 2007"* (Puddington 2007).[157]

In terms of the methodological operationalization, there are only minor changes compared to the traditional FH ratings.[158] Firstly, the overall scale (1-7) is omitted. Instead, the sub scores are utilized for data processing. This is due to the fact that the sub scores allow for a more detailed differentiation than the simplistic overall scales. Regarding the dimension of political rights, there will be no change. All three sub scores are integrated into the QDI. Concerning the civil liberties, however, the subcategory "rule of law" is excluded, because it represents a separate democracy dimension, which will be covered by another index, notably the WGI.[159] As a result, the civil liberties dimension will comprise only 44 instead of the full 60 sub score points.

Analogous to the WGI, both of the FH dimensions are rescaled via a Z-transformation in order to guarantee comparability with the other indices.[160] Besides, the regime classifications ("free", "partly free", "not free"), which are deployed by FH, are also omitted due to the fact that the QDI does not entail any threshold determination.

6.1.3   Operationalization of Vanhanen's Index of Democratization

The most recent edition of Vanhanen's comprehensive cross-sectional country study was issued in 2003 and covers 170 countries during the time period 1999-2001 (Vanhanen 2003). Due to this fact, there is a need for replicating Vanhanen's ID for the year under consideration, notably 2006. In the course of this replication, some adaptations have to be made as compared with the original version of the ID. Of course, the principal goal is to follow the initial methodology as precisely as

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[157] The relevant data can be retrieved via the Freedom House website:
http://www.freedomhouse.org/template.cfm?page=276, [DoR: 05.07.2008]
[158] See Appendix F. Freedom House – Operationalization for 2006, 121
[159] See 6.1.1 Operationalization of Worldwide Governance Indicators, 78
[160] See 6.2.1 Z-Transformation, 83

possible. However, some corrections in the course of the ID's operationalization enable the immediate mitigation of some afore-mentioned methodological deficits. [161] Subsequently, all of the commonalities and differences between the replicated and original ID will be discussed in order to meet the criteria of transparency and replicability.

The general conceptual attempt of the QDI is to integrate as many countries as possible into the analysis in order to generate a truly global cross-sectional study. Regarding this aspect, the Vanhanen index serves as a bottleneck, because it "only" takes into account 170 countries, whereas the WGI and Freedom House analyze more than 200 states and territories.[162]

As has already been mentioned, 2006 serves as the year under consideration for the operational setup of the QDI within this thesis. Analogous to Vanhanen's methodology, previous years are also taken into account, if no elections were held in 2006 in a specific country. Similarly, only last rounds of elections are dealt with for analytic purposes, especially in the case of presidential elections (Vanhanen 2003, 57). Of course, election year, election type, the largest party, the victorious executive, as well as all data sources utilized are cited as transparently as possible.[163]

In the course of the ID's replication for 2006, Vanhanen's (2003) country classifications in terms of the three institutional power arrangements, notably executive dominance, parliamentary dominance, or concurrent powers, will be adopted. Only some countries are classified differently, as their have been obvious political changes since 1999-2001.[164]

Similarly, the weightings of institutions provided by Vanhanen (2003) have been adopted in case of concurrent powers. Apart from this, some countries have been assigned the same participation and competition values, notably zero percent, as Vanhanen did in his latest country study. These countries typically represent "classical

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[161] See 5.3.3 Concept Validation, 71

[162] The integration of Vanhanen's ID depends on the country classifications concerning the institutional power arrangements, which are provided by Vanhanen. Of course, these classifications cannot be replicated for countries, which are not included within Vanhanen's most recent study, because self-defined classifications may not necessarily coincide with Vanhanen country appraisals.

[163] See Appendix G. Vanhanen's Index of Democratization – Replication for 2006, 126

[164] The countries with differing classifications in terms of institutional power arrangements comprise: Burundi, Cuba, DR Congo, Iran, Iraq, Montenegro, Nepal, Serbia, and Sierra Leone. See Appendix G. Vanhanen's Index of Democratization – Replication for 2006, 126

authoritarian" or monarchal regimes, where no executive change has occurred over a long period.[165]

Regarding the both dimensions, participation and competition, there have also been some important adaptations. For instance, the participation indicator is calculated on the basis of a country's enfranchised, not its total population. Cleary, this represents a major methodological change as contrasted with the original concept provided by Vanhanen (2003). Unlike Vanhanen (2003) reasons, data concerning registered voters is mostly available without problems (Vanhanen 2003, 56).[166]

Obviously, Vanhanen utilizes total population figures, as they may be more easily available for his extensive longitudinal studies, which also comprise elections of the nineteenth century. For analyses of democratic quality in the present, however, it seems more valuable to process data on registered voters instead. Simultaneously, this approach allows for the elimination of one of the major deficits and critiques concerning Vanhanen's participation indicator, because variation in countries' population age structures is no longer taken into account.[167] Consequently, the immanent bias favoring industrial countries can be neutralized.

In this context, the cut-off point of 70 percent will equally be omitted, as Vanhanen (2003) introduces this upper limit with reference to the total population figures he applies. There is no theoretical justification for retaining this limit in the frame of the operationalization of Vanhanen's ID for the QDI. Finally, Vanhanen also took referendums into account within his most recent study by increasing the participation value by five percent per referendum (Vanhanen 2003, 61-3). Although referendums represent an important mode of participation, which may contribute to a more valid assessment of a country's democratic quality, they will be omitted within the frame of the QDI. This is due to the fact that the ascription of a certain percentage per referendum remains purely arbitrary and lacks any theoretical justification.

Regarding the competition indicator, there will be no substantial changes. The cut-off point of 70 percent will be retained in order to limit the bias towards proportional

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[165] The list of these countries comprises: Angola, Bahrain, Bhutan, Brunei, Burma (Myanmar), Cambodia, China, Eritrea, Jordan, Kuwait, Libya, Morocco, North Korea, Oman, Pakistan, Qatar, Saudi Arabia, Somalia, Syria, Thailand, Turkey, Turkmenistan, United Arab Emirates, Vietnam. See Appendix G. Vanhanen's Index of Democratization – Replication for 2006, 126
[166] See for example: www.electionguide.org, africanelections.tripod.com, www.parties-and-elections.de, www.idea.int/vt
[167] See 5.3.3 Concept Validation, 71

electoral systems and to adhere to Vanhanen's original concept (Vanhanen 2003, 59). Nevertheless, this limit percentage remains arbitrary and an admitted point of criticism. In terms of parliamentary competition, Vanhanen (2003) takes into account either the party shares, deriving from election results, or the effective distribution of seats (Vanhanen 2003, 56). In order to generate reliable results, both types for determining parliamentary competition will be processed to an arithmetic mean in the frame of QDI operationalization, provided that relevant data is available. In the case of concurrent powers, the competition value analogously represents a combination of executive and parliamentary competition (Vanhanen 2003, 58-9).

Finally, the actual percentages of both of Vanhanen's democracy dimensions are Z-transformed in order to be compatible with the transformed values of the other three dimensions. Analogous to the previous Z-transformations, the base scale for the transformation is FH civil liberties.[168]

6.2 Aggregation Methodology of the QD-Index

After having replicated or adapted the three constituent indices, WGI, FH and Vanhanen's ID for 2006, their respective dimensions are now aggregated to the overall QDI.[169] As can be derived from figure 16, the combination of these three indices allows for the coverage of five fundamental dimensions of democratic quality. However, two additional important dimensions, notably horizontal and vertical accountability, cannot be adequately covered by the WGI, FH or the Vanhanen's ID. As a result, there remains a substantial gap between the theoretical conceptualization and the practical operationalization of the QDI.[170] Nonetheless, the aggregation of the five dimensions covered by current democracy indices can generate added value, as it represents a proximate realization of the ideal theoretical concept.

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[168] See 6.2.1 Z-Transformation, 83
    See Appendix G. Vanhanen's Index of Democratization – Replication for 2006, 126
[169] See Appendix A. Constitution of the QD-Index 2006, 108
[170] See 8.2 Further Research Proposals, 105
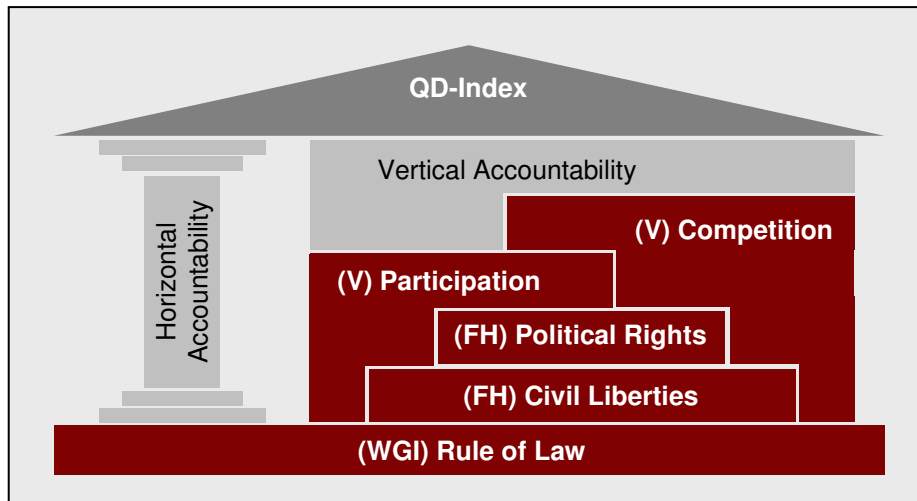
Fig. 16: Operationalization of the QD-Index

(Source: Own illustration)

6.2.1   Z-Transformation

Due to the fact that the three constituent indices feature different scales, they have to be transformed in order to be accurately combined. To this end, a statistical means, namely the z-transformation, is applied. The z-transformation transforms a random distribution into a distribution with a mean value of zero and a standard deviation of one (Bortz 1999, 756). Consequently, prior different scales can now be compared and combined without methodological fallacies.

With regard to the QDI, the initial values, also called x-values, (FH political rights ranging from 0 to points, FH civil liberties ranging from 0 to 44 points, Vanhanen Participation ranging from 0 to 100%, Vanhanen Competition ranging from 0 to 70%, and WGI rule of law ranging from -2.57 to +2.01) are transformed into z-values (ranging from about -2.5 to +2.5). For each of the five dimensions, the mean value and the standard deviation are computed, as illustrated in table 3. After the z-transformation, the distributions of the respective z-values feature a mean value of zero and a standard deviation of one.[171]

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[171] See Appendix D. Worldwide Governance Indicators – Operationalization for 2006, 114
See Appendix F. Freedom House – Operationalization for 2006, 121
See Appendix G. Vanhanen's Index of Democratization – Replication for 2006, 126

$$\mu = \frac{\sum\limits_{i=1}^{n} x_i}{n} \qquad \sigma = \sqrt{\frac{\sum\limits_{i=1}^{n} (x_i - \mu)^2}{n}} \qquad z = \frac{x - \mu}{\sigma}$$

Tab. 3: Formulas for Z-Transformation

(Source: Bortz 1999, 757-62)

In order to make the distinct dimensions comparable and combinable, four of them are now re-transformed to the scale of a fifth dimension with its mean value and standard deviation, e.g. FH civil liberties, which is illustrated in table 4. As a result, all of the five dimensions ultimately feature the same FH scale with the same FH mean value and the same FH standard deviation and can, thus, be correctly compared and combined.[172]

$$z = \frac{x - \mu}{\sigma} \longrightarrow x = z \cdot \sigma + \mu$$

$$x_{x\_FH\_CL} = x_{FH\_CL}$$

$$x_{x\_FH\_PR} = z_{FH\_PR} \cdot \sigma_{FH\_CL} + \mu_{FH\_CL}$$

$$x_{x\_V\_P} = z_{V\_Part.} \cdot \sigma_{FH\_CL} + \mu_{FH\_CL}$$

$$x_{x\_V\_C} = z_{V\_Comp.} \cdot \sigma_{FH\_CL} + \mu_{FH\_CL}$$

$$x_{x\_WGI\_RoL} = z_{WGI\_RoL} \cdot \sigma_{FH\_CL} + \mu_{FH\_CL}$$

Tab. 4: Re-Transformation of z-values

(Source: Own illustration)

6.2.2 Aggregation Formula

After having computed all re-transformed values, the QDI can be calculated by aggregation of its constitutive index dimensions. In general, two principal modes for aggregating the five dimensions are available, notably addition and multiplication.

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[172] The mean value and the standard deviation of the FH scale, which is used for all of the re-transformation calculations, are μ=28.16 and σ=11.74, respectively.
See Appendix F. Freedom House – Operationalization for 2006, 121

The multiplicative aggregation prevents for the compensation of low dimensional ratings with higher ones, as would be the case in additive aggregation methodologies. Similar to Vanhanen's deliberations, countries need to score relatively high in all of the five democracy dimensions in order to be assigned high levels of democratic quality (Vanhanen 2003, 64). By contrast, if a country rates zero percent in one dimension, also the overall QDI value will be zero.

Despite the positive aspects of a multiplicative methodology, the QDI is calculated on an additive basis, which means that a country's overall QDI ranking represents an arithmetic mean of its dimensional scores, which is illustrated in table 5.

$$QDI_{2006} = \frac{x_{x\_WGI\_RoL} + x_{x\_FH\_CL} + x_{x\_FH\_PR} + x_{x\_V\_P} + x_{x\_V\_C}}{5}$$

Key:

QDI........	Quality of Democracy – Index	PR	Political Rights
RoL........	Rule of Law	C............	Competition
CL..........	Civil Liberties	P............	Participation

Tab. 5: Aggregation Formula of the QD-Index
(Source: Own illustration)

The additive methodology provides some advantages: Contrary to the multiplicative methodology, the country ranking does not change, irrespective of the dimension which serves as the base scale. In addition, the number of negative re-transformed values does not matter. Finally, the additive methodology provides for clear country rankings as contrasted with the clustering of zero-rating countries, when applying the multiplicative methodology. Admittedly, inferior dimensional ratings can, however, be compensated with better results in other country dimensions.

As can be derived from the aggregation formula, all of the five dimensions are weighted equally. Put differently, the actual democracy dimensions are not weighted according to their relative importance. In turn, this implies that the three processed indices are unequally incorporated into the overall QDI results. For instance, the rule of law represents the basis upon which all other dimensions of democratic quality rest. However, rule of law is equally weighted within the QDI methodology. The reason why dimensional weights have been omitted is the fact that there is simply no theoretical justification for other concrete weighting percentages per dimension, either. However, the operationalization is in accordance with the prior conceptualization of the QDI,

because all dimensions are valued equally irrespective of the initial index they are stemming from. Nonetheless, this problem still remains a justified point of criticism concerning the operationalization of the QDI.[173]

6.3 QDI - Country Ranking 2006

As has been described above, Vanhanen's most recent country study serves as the bottleneck in terms of the scope of countries assessed by the QDI (Vanhanen 2003). The evaluation of the world's smallest countries is omitted due to the fact, that they are heavily contingent upon external influences, which would distort their relative democratic quality ratings (Vanhanen 2003, 31). The ranking of the 167 countries, which have been assessed within the frame of the present study for 2006, is shown in table 6. The top ten ranked countries are Iceland, Denmark, Luxembourg, Belgium, Netherlands, Norway, Sweden, Australia, Austria, and New Zealand.[174] Eight out of these ten countries are European states. Among the first 25 states, there are only seven non-European countries.

The interpretation of this fact can be threefold: Firstly, European countries may really feature higher levels of democratic quality than other countries. Secondly, the results may underscore the potential ideological bias towards European democracy perceptions. Finally, the QDI itself may produce somewhat distorted results due to its methodological construction. For the purpose of discussion of the results, some of the country positions will be analyzed in more detail.

Austria obtains rank 9th, which is mostly due to the very high ratings regarding rule of law, civil liberties, and political rights. Participation and competition scores are slightly lower due to the parliamentary elections in 2006. Another interesting case is Chile, which ranks higher than prominent democracies, such as Israel or the Czech Republic. The high ratings of Chile are predominately based on high scores in terms of rule of law, civil liberties, political rights, and participation.

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[173] See 7 Concept Validation of the QD-Index, 92
[174] Some of the countries have different rankings despite equal QDI scores. This is due to rounding effects of the overall QDI ratings. As a result, the ranking of nearly equally rating countries is of minor relevance.

Rank	Country	QDI	Rank	Country	QDI	Rank	Country	QDI
1	Iceland	44.5	57	Mexico	32.6	112	Ethiopia	24.9
2	Denmark	44.4	58	Romania	32.5	113	Niger	24.9
3	Luxembourg	44.0	59	Peru	32.4	114	Central African Rep.	24.2
4	Belgium	43.9	60	Namibia	32.1	115	Mozambique	24.0
5	Netherlands	43.7	61	Dominican Republic	32.1	116	Burkina Faso	23.8
6	Norway	43.6	62	Botswana	31.9	117	Haiti	23.3
7	Sweden	43.5	63	Indonesia	31.5	118	Gambia, The	23.1
8	Australia	43.1	64	Papa New Guinea	31.5	119	Syria	23.0
9	Austria	42.9	65	Bolivia	31.3	120	Morocco	22.6
10	New Zealand	42.2	66	Ukraine	31.2	121	Tunisia	22.5
11	Germany	42.2	67	Serbia	31.2	122	Iraq	22.4
12	Finland	42.2	68	Nicaragua	31.0	123	Afghanistan	22.3
13	Malta	41.7	69	Guyana	30.7	124	Maldives	22.2
14	Cyprus	41.7	70	El Salvador	30.6	125	Russia	22.1
15	Canada	41.5	71	Senegal	30.6	126	Thailand	22.1
16	Switzerland	40.9	72	Solomon Islands	30.4	127	Tajikistan	21.9
17	United Kingdom	40.1	73	Sri Lanka	30.4	128	Algeria	21.6
18	Ireland	39.9	74	Lesotho	30.3	129	Kyrgyzstan	21.6
19	Spain	39.8	75	Bosnia-Herzegovina	30.2	130	Rwanda	21.6
20	Chile	39.8	76	Ecuador	30.1	131	Yemen	21.1
21	Estonia	39.2	77	Turkey	29.9	132	Cameroon	20.9
22	Bahamas	39.1	78	Jamaica	29.8	133	Azerbaijan	20.6
23	Uruguay	38.6	79	Benin	29.7	134	Egypt	20.0
24	Czech Republic	38.4	80	Paraguay	29.7	135	DR Congo (Zaire)	20.0
25	United States	38.0	81	Macedonia	29.1	136	Congo (Brazzaville)	20.0
26	Israel	38.0	82	Zambia	29.0	137	Togo	19.9
27	Portugal	37.6	83	Malawi	28.8	138	Kazakhstan	19.8
28	Latvia	37.6	84	Liberia	28.6	139	Vietnam	19.7
29	Italy	37.6	85	Montenegro	28.3	140	Guinea	19.7
30	Hungary	37.5	86	Albania	28.1	141	Djibouti	19.2
31	Japan	37.4	87	Bangladesh	28.0	142	Cambodia	18.5
32	France	37.0	88	Fiji	27.9	143	Belarus	18.4
33	Costa Rica	37.0	89	Madagascar	27.8	144	Iran	18.4
34	Slovenia	37.0	90	Guinea-Bissau	27.5	145	Chad	18.0
35	Greece	36.9	91	Mauritania	27.2	146	Laos	17.8
36	Mauritius	36.6	92	Mali	27.2	147	Equatorial Guinea	16.7
37	Taiwan	36.5	93	Malaysia	27.1	148	Cuba	16.6
38	South Korea	36.1	94	Georgia	26.9	149	Zimbabwe	16.3
39	Lithuania	35.9	95	Kenya	26.8	150	Cote D'Ivoire	16.2
40	Argentina	35.7	96	Sierra Leone	26.5	151	Bahrain	15.7
41	Barbados	35.6	97	Honduras	26.5	152	Uzbekistan	15.5
42	Panama	35.1	98	Nepal	26.5	153	Bhutan	14.7
43	Slovakia	35.0	99	Colombia	25.8	154	Qatar	14.2
44	Ghana	34.9	100	Burundi	25.7	155	Oman	13.8
45	Brazil	34.8	101	Uganda	25.6	156	Brunei	13.4
46	Bulgaria	34.7	102	Moldova	25.5	157	United Arab Emirat.	13.2
47	India	34.6	103	Kuwait	25.3	158	Pakistan	12.3
48	Poland	34.5	104	Armenia	25.3	159	Angola	10.1
49	Cape Verde	34.3	105	Guatemala	25.2	160	Saudi Arabia	10.1
50	Mongolia	34.3	106	Tanzania	25.1	161	China	10.1
51	Belize	34.1	107	Nigeria	25.0	162	Libya	8.1
52	South Africa	33.6	108	Lebanon	25.0	163	Eritrea	8.1
53	Singapore	33.5	109	Venezuela	25.0	164	Burma (Myanmar)	6.3
54	Philippines	33.4	110	Comoros	25.0	165	North Korea	5.6
55	Croatia	32.9	111	Jordan	24.9	166	Turkmenistan	5.1
56	Trinidad and Tobago	32.8				167	Somalia	3.0

Tab. 6: QDI Country Ranking 2006

(Source: Own illustration)

By contrast, Switzerland only ranks as the 16th country within the QDI ranking. Despite extremely high ratings concerning rule of law, political rights, civil liberties and competition; participation levels are relatively low. This circumstance is mostly due to the participation indicator, notably electoral voter turnout, and the omission of direct modes of participation, such as referendums. This flaw has already been taken into account within the frame of Vanhanen's most recent country study (Vanhanen 2003, 59).

Similarly, the relatively low ranking of the United States of America is due to low ratings regarding participation and competition. Despite the high ratings in terms of rule of law, civil liberties and political rights[175], the two-party system induces low competition levels and thus relatively low overall QDI results. Analogously, the relative low ranking of France seems to be due to the exceptional presidential elections in 2002[176], inducing low competition scores and thus also a relatively low overall QDI score.

Rather sobering is the QDI ranking of Russia. It is predominantly based on the low ratings in terms of rule of law, civil liberties, and especially political rights. The countries with least democratic quality, according to the QDI ranking 2006, are Eritrea, Myanmar, North Korea, Turkmenistan, and Somalia, all of which feature comparably low ratings with regard to the five democracy dimensions under consideration. Due to the additive aggregation methodology, even these countries with least democratic quality can still be differentiated and ranked. In other words, a clustering of countries with zero points, which would be the case if the multiplicative methodology was applied, can be avoided.

6.4　Correlations of QDI Results

After having dealt with the concrete QDI country ranking 2006, this section of the chapter will analyze interrelations of the QDI with other values. On the one hand, correlations between the overall QDI scores and its constituent indices are conducted. On the other hand, the QDI results are compared with external values, as well.

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[175] Admittedly, the Freedom House ratings may be biased towards the democracy conception of the USA. As a result, the USA score high in terms of political rights and civil liberties.

[176] In 2002 incumbent president Jacques Chirac won a landslide victory against far right Jean-Marie Le Pen, which was commonly considered an anti-Le pen rather than a pro-Chirac vote of the French population.

6.4.1 Comparison QDI Results vs. Constituent Indices

First of all, the question arises, which of the constituent democracy dimensions impacts the QDI results most. To answer this question, a Pearson correlation analysis between the QD-Index and its based-upon index dimensions is conducted, which is summarized in table 7.

Remarkably, civil liberties (.936) and political rights (.934) both highly correlate with the QDI ratings. Astonishingly, both FH dimensions correlate nearly identically with the QDI. With regard to the WGI, a significantly high correlation coefficient with the QDI can also be attested, however to a lesser extent (.706). Finally, the Vanhanen dimensions feature quite different correlation coefficients (.592/.809). This may be due to the fact that voter turnout constitutes a more volatile indicator than competition figures, as participation results only represent an electoral snapshot. However, it is important to note that the correlation coefficient of the competition dimension is also influenced by the upper limit of 70 percent.[177]

N = 167	QDI	WGI_RoL	FH_CL	FH_PR	V_P	V_C
QDI		.706**	.936**	.934**	.592**	.809**
WGI_RoL			.666**	.630**	.155*	.354**
FH_CL				.960**	.389**	.706**
FH_PR					.388**	.736**
V_P						.419**

Tab. 7: Correlation Coefficients between QDI and Constituent Dimensions 2006
(Source: Own calculation)
(**/* correlation is significant as the 0.01/0.05 level; 2-tailed; 167 countries)

Besides the correlations among the QDI and its defining dimensions, the correlation coefficients among the dimensions themselves are important from an analytical perspective, as well. Again, the WGI nearly identically correlate with the FH dimensions (.666/.630), whereas the correlation coefficients are comparably low with the Vanhanen dimensions (.155/.354). As has already been outlined above, this relation may be contingent upon the relative stability of the countries' rule of law status as compared with the relative volatility of their participation outcomes. Additionally, the rule of law

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[177] See 6.1.3 Operationalization of Vanhanen, 79

may be conceptually closer to political rights and civil liberties than to competition and participation.

Apart from this, political rights and civil liberties highly correlate (.960), which underlines that FH rates countries relatively equally in terms of political rights and civil liberties. This fact stresses the homogenous impact of FH country scores on the overall QDI results. By contrast, the ID dimensions correlate to a much lesser extent (.419). Consequently, the impact of Vanhanen's ID on the final QDI ratings is comparably smaller (.592/.809).

6.4.2 Comparison of QDI Results vs. External Values

Apart from an internal correlation, the QDI results can equally be correlated with external values, such as economic indicators.[178] In this respect, there will be two exemplary correlation calculations of the QDI, notably with gross domestic product figures based on purchasing-power-parity per capita (GDP_PPP) and with life expectancy data. The outcome of the first correlation of the QDI scores with the GDP_PPP for 2006 is illustrated in table 8.[179]

N = 163	QDI	WGI_RoL	FH_CL	FH_PR	V_P	V_C
GDP_PPP	.446**	.797**	.409**	.383**	-.019	.183*

Tab. 8: Correlation Coefficients between QDI and GDP PPP per capita 2006
(Source: Own calculation, GDP data by IMF 2008)
(**/* correlation is significant as the 0.01/0.05 level; 2-tailed; 163 countries)

Apparently, there is a positive and significant connection between the GDP_PPP and the QDI for the year 2006 (.446) for the 163 countries under consideration.[180] Nonetheless, the correlation coefficient is relatively low. This fact may underscore the above mentioned statement that economic performance does not necessarily depend

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[178] As has been outlined numerous times throughout this diploma thesis, the conceptual core of the QDI focuses on political democracy, thus explicitly omitting maximalist democracy definitions, which include output-oriented policies, economic welfare, etc. Nonetheless, an external correlation with economic data may be of interest from an explorative perspective. See 1.3 Thesis' Focus of Research, 5

[179] GDP purchasing-power-parity per capita data is retrieved from IMF 2008, [DoR: 15.11.2008] For the purpose of comparability, this data has equally been Z-transformed. See Appendix H. Correlation Data for GDP PPP 2006, 138

[180] IMF 2008 does not provide GDP_PPP data for 2006 with regard to Cuba, Iraq, North Korea, and Somalia.

on a specific type of political system, especially democratic regimes.[181] Analogously, civil liberties as well as political rights of a country do not highly correlate with its GDP (.409/.383). Besides, there is nearly no interrelation between the GDP and democratic dimensions, such as participation (-.019) or competition (.183). However, there seems to be a rather highly correlating relation among GDP_PPP and the dimension of rule of law (.797). This fact may be due to the circumstance that countries with relatively high levels regarding legal certainty provide a proper basis for economic development. This legal certainty, however, may be provided by non-democratic regimes, as well, which would explain the lower correlation coefficient between GDP_PPP and the overall QDI results (.446).

Another interesting comparison is the correlation of the overall QDI results of countries with their populations' respective average life expectancies, as illustrated in table 9.[182] Not surprisingly, the various correlation coefficients do not differ substantially from the coefficients derived from the GDP correlation. Though there is a positive relationship between the quality of democracy of a country and the life expectancy of its population, the relationship remains fairly weak (.468) for the 164 countries under consideration.[183] Similarly, there is only weak interrelation of the life expectancy indicator, on the one hand, and the civil liberties and political rights indicators, on the other hand (.438/.405).

N = 164	QDI	WGI_RoL	FH_CL	FH_PR	V_P	V_C
Life Exp	.468**	.661**	.438**	.405**	.073	.229**

Tab. 9: Correlation Coefficients between QDI and Life Expectancy 2006
(Source: Own calculation, Life Expectancy data by WDI 2008)
(**/* correlation is significant as the 0.01/0.05 level; 2-tailed; 164 countries)

Once again, there is practically no interrelation of the participation and the competition dimensions with the life expectancy figures for the year 2006 (.073/.229). The only dimension, which correlates relatively stronger with the QDI as compared to the other indicators, is the rule of law (.661). Analogous to the deliberations above with regard to the economic performance of a country, legal certainty may provide an improved basis for economic development, which in turn manifests itself in terms of higher life expectancy of a country's population.

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[181] See 1.3 Thesis' Focus of Research, 5
[182] Life Expectancy data is retrieved from WDI 2008, [DoR: 15.11.2008]
    For the purpose of comparability, this data has equally been Z-transformed.
    See Appendix I. Correlation Data for Life Expectancy 2006, 142
[183] WDI 2008 do not provide data on life expectancy for Afghanistan, Iraq, and Taiwan.

7   Concept Validation of the QD-Index

Subsequent to the quantitative, statistical evaluation of the QDI in terms of correlation with its constituent indices, this chapter follows a more qualitative approach. The concept validation approach by Müller/Pickel (2007)[184] will be applied for critically evaluating the concept quality of the QDI. The respective results are illustrated in figure 17. Of course, not all of the validation attributes can be automatically transferred to the QDI assessment due to the fact that the approach by Müller/Pickel (2007) primarily focuses on genuine democracy indices, not meta-indices. Nevertheless, this approach serves as a valuable means to systematically analyze the QDI's strengths and weaknesses.

Obviously, the QDI differs in terms of his conceptualization as compared with its operationalization, because only five out of seven democracy dimensions could be operationalized. Of course, this fact represents a serious deficit. However, the QDI constitutes an experimental meta-concept, based on an ideal theoretical conceptualization. Concerning its operationalization, the QDI still remains a work in progress. As a result, the QDI will be validated according to its seven dimensions in terms of its conceptualization and according to its five dimensions in terms of its operationalization, notably measurement and aggregation.

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[184] See 2.4.2 Approach by Müller/Pickel (2007), 28
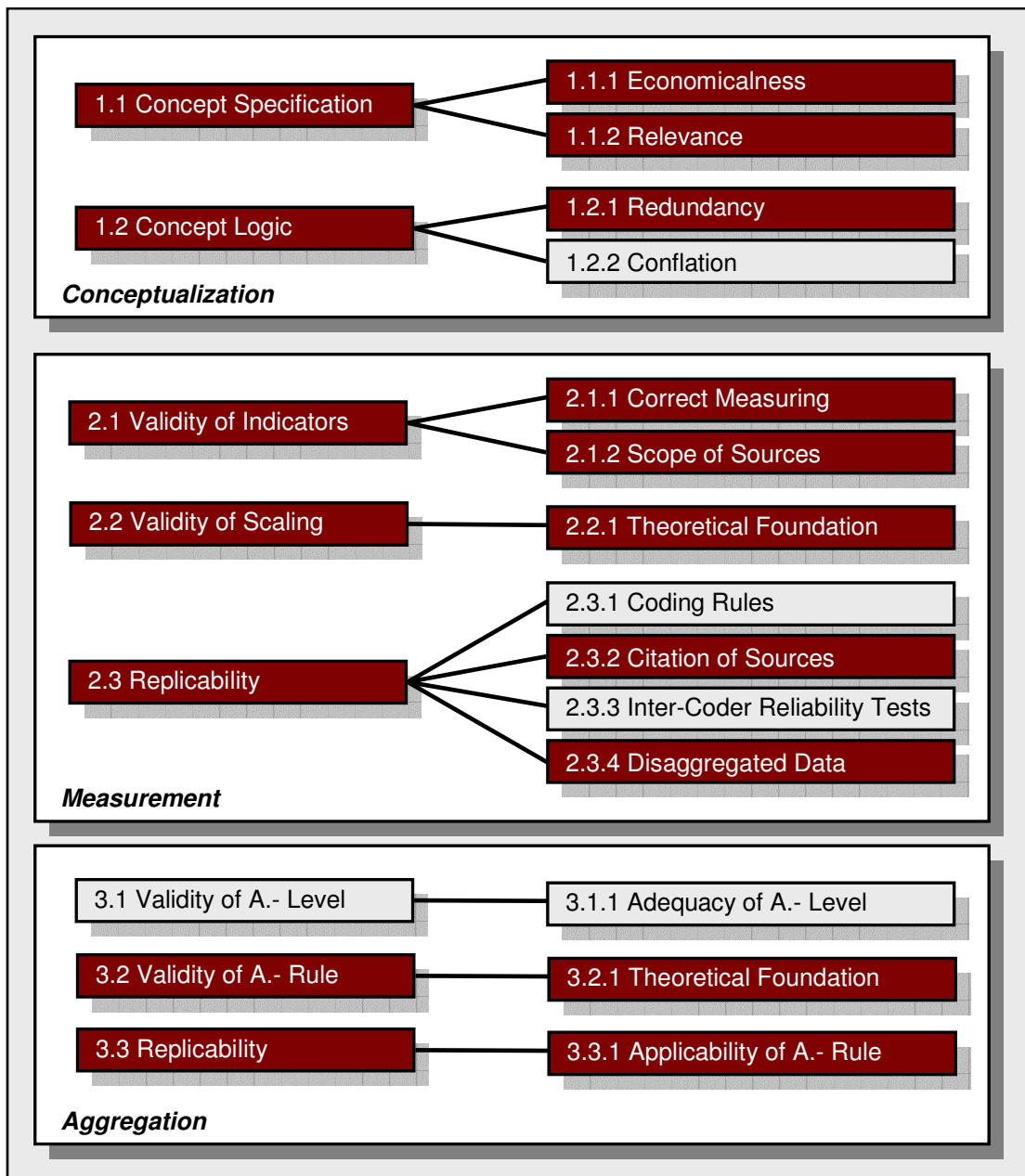
Fig. 17: Concept Validation of the QD-Index

(Source: Own illustration following Müller/Pickel 2007, 520-3)

7.1   Conceptualization

One of the strengths of the QDI represents its *concept specification (1.1)*. The QDI predominantly focuses on political democracy. Socioeconomic factors as well as conducive elements, such as regime stability or government effectiveness in terms of policy-output are omitted, which underlines the concept's *economicalness (1.1.1)*. Related with this question is the aspect of conceptual *relevance (1.1.2)*. By integrating democracy dimensions, such as rule of law, civil liberties, political rights, participation, competition, vertical and horizontal accountability, the concept covers all relevant

aspects of political democracy. Equally, the three core principals of democracy, notably liberty, equality and control, are covered by the concept.[185]

The seven (five) democracy dimensions incorporated into the QDI are strongly interrelated. The rule of law constitutes the most fundamental element of democratic quality. Based on this, civil liberties serve as the foundation for political rights, which in turn represent the basis for participation and competition. Finally, vertical accountability draws on all of the afore-mentioned democracy dimensions in order to work effectively. Only, horizontal accountability does not necessarily interrelate with the other elements of democratic quality, as it solely presupposes an effective rule of law.

As can be derived from this short recapitulation of the index construction, the QDI scores well with regard to its conceptual *redundancy (1.2.1)*, because all of the afore-mentioned dimensions are indispensable for the accurate evaluation of democratic quality. Of course, it may be argued that horizontal accountability represents a specific element of the rule of law, that participation overlaps with vertical accountability, or that competition and participation already implicate political and civil rights to some degree.

Nonetheless, the dimensions are measured separately. Admittedly, horizontal accountability heavily depends on the functioning of the rule of law. However, horizontal accountability draws on the specific relations among state institutions, therefore highlighting a specific element of democratic quality. Thus, the integration of this element into the broader category of rule of law would lead to a substantial loss of information and differentiation.

Equally, vertical accountability may well go far beyond simple modes of participation in terms of elections, which makes the separate assessment of the dimension more reasonable. Finally, it is one of the explicit strengths of the QDI that it enables the separate assessment of rights, competition, as well as participation, thereby eliminating specific weaknesses of the individual democracy indices. Any abandonment of a differentiated assessment would automatically entail substantial losses of information.

As compared with redundancy the aspect of *conflation (1.2.2)* is much easier to deal with. Due to the fact that the QDI exclusively processes pre-established index

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[185] Admittedly, the control dimension could only be operationalized to a minor degree due to the lack of adequate democracy indices assessing horizontal and vertical accountability.

dimensions and omits the evaluation of more fine-grained democracy attributes, there assessment of conceptual conflation remains irrelevant.

7.2 Measurement

Because the QDI constitutes a meta-index, which is based on three constituent democracy indices, all their advantages and deficits in terms of *correct measuring (2.1.1)* equally apply to the QDI.[186] The great benefit of the QDI, however, represents the possibility of mitigating individual deficiencies via combination of the indices. For instance, FH does not explicitly measure democracy. It is rather the integration of FH that enables the correct depiction of democratic quality.

Equally, the integration of Vanhanen's ID allows for mitigating one of its conceptual deficits, notably the pretended implicit measurement of political and civil rights. Indeed, it is one of the core strengths of the QDI that it allows for the combination of conceptually complementary democracy indices despite their methodologically different approaches. Similar to the concept methodological principle of the WGI, the combination of the indices provides the opportunity for more precise and more accurate assessments of democratic quality than individual democracy indices could do.

Apart from this, the QDI features a broad *scope of sources (2.1.2)*, which represents an additional advantage as compared with the constituent indices. As has been outlined in the previous chapters, FH draws on numerous public as well as non-governmental sources.[187] Besides, the WGI process 35 different sources provided by 32 different organizations.[188] Finally, Vanhanen's ID has been replicated for 2006, based on several sources, as well.[189] However, in the frame of the ID the scope of sources does not play such an important role due to the reliance on objective data.

The *theoretical foundation (2.2.1)* of the validity of scaling is two-fold. On the one hand, the QDI aims at setting up an instrument to assess and rank countries via a democratic continuum. As a result, there is a need for a differentiated scale. On the other hand, the QDI represents a combination index. Consequently, the constituent indices have to be homogenously transformed by rescaling in order to be compatible for further analyses.

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[186] See 5.1.3.2 Measurement, 56; 5.2.3.2 Measurement, 64; 5.3.3.2 Measurement, 73
[187] See 5.2 Freedom House, 60
[188] See 5.1 Worldwide Governance Indicators, 52
[189] See 6.1.3 Operationalization of Vanhanen, 79

Moreover, the *replicability (2.3)* represents a major strength of the QDI. Indeed, it has been the initial motivation to construct a meta-index, which can be replicated on an annual or biannual basis in order to generate cross-sectional as well as longitudinal comparative rankings of democratic quality. The processing of the constituent indices in the course of the QDI construction is aimed to be simple and replicable. As a result, there has been emphasized the importance of methodological transparency throughout the thesis.[190]

The validation criterion *coding rules (2.3.1)* does not apply to the concept assessment of the QDI, as there are no separate coding rules utilized. In fact, this criterion only applies to the concept validation of the individual democracy indices. By contrast, the *citation of sources (2.3.2)* plays an important role for the transparency and the replicability of the QDI, as well. Of course, the QDI depends of the citation of the sources of the constituent indices. Put differently, the QDI cannot cite sources which have not been cited by the individual sources themselves. This holds especially true of the WGI as well as FH. For as Vanhanen's ID has been replicated for 2006 autonomously, all the processed sources have been indicated as transparently as possible.[191]

As contrasted with the necessity of comprehensible citation of data sources, there is no need for *inter-coder reliability tests (2.3.3)* in the frame of the QDI. This is due to the fact that the index construction remains an objective procedure, which does not involve any genuine subjective measure. This, in turn, also represents an important advantage of the QDI as a meta-concept as compared with alternative individual democracy indices. Admittedly, the problem of lacking inter-coder reliability tests at the constituent indices' level still remains.

Finally, the QDI also provides information about *disaggregated data (2.3.4)* by explicitly citing the values for each processed democracy dimension. The provision of further disaggregated data remains the task of the individual indices and does not constitute a genuine validation criterion of the QDI.

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[190] See 6.2 Aggregation Methodology of the QD-Index, 82
[191] See Appendix G. Vanhanen's Index of Democratization – Replication for 2006, 126

7.3 Aggregation

It may be a valuable point of criticism that the QDI suffers from little *adequacy of its aggregation level (3.1.1)*, as it may be impracticable to generate one singe overall scale for such a complex phenomenon like the quality of democracy.[192] Although this criticism is justifiable to some degree, the aggregation to one singe score enables the simple cross-sectional comparison of countries, which represents a valuable asset for the evaluation of democratic quality. Nonetheless, the QDI's sub scores, notably the five individual dimension values, are published, which in turn allows for the comparison of countries according to separate dimensions, as well.

Apart from this, critics may doubt the general validity of a meta-index, as the combination of already existing indices entails a non-negligible loss of information, hence making country comparisons in terms of democratic quality pointless. Indeed, the contrary is the case. A meta-index, such as the QDI, allows for the combination of indices and thus for the combination of the indices' strengths while diminishing their respective deficits.[193]

Related with this aspect, all thresholds provided by the constituent indices will be omitted. On the one hand, the various thresholds cannot be combined in a reasonable and consistent manner. On the other hand, the QDI's theoretical concept explicitly refuses any threshold determination, because democratic quality is perceived to represent a continuum rather than "democratic", "authoritarian", or "totalitarian" clusters. In addition, there is simply no theoretical justification for any concrete threshold determination.[194]

The *theoretical justification (3.2.1)* of the aggregation rule represents another strength of the QDI. Contrary to Vanhanen's deliberations, the QDI's aggregation methodology is based on an additive combination of democracy dimensions. Admittedly, this approach does not ensure that countries only receive high overall quality ratings, if all of their separate dimensions are rated equally high. However, it allows for achieving the primary goal of the present diploma thesis, notably the differentiated assessment of countries according to their quality of democracy. Put differently, the application of an additive aggregation methodology enables the differentiated democracy evaluation of least democratic countries, as well.

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[192] See 2.3.5 Scale Construction, 22
[193] See 5.1 Worldwide Governance Indicators, 52
[194] See 2.3.6 Threshold Problem, 22

Admittedly, this additive procedure does not necessarily explain why the five dimensions should be weighted equally. In fact, it remains doubtful why the rule of law should receive the same weight like competition or participation. Obviously, the relative importance of the actual dimensions differs. Nonetheless, the simple additive methodology has been applied for the operationalization of the QDI due to the fact that there is no theoretical justification for determining concrete weights to each dimension. Put differently, although there is no theoretical justification for equal weights, there is no theoretical justification for differing weights, either. As a result, equal weights have been maintained in order to avoid incomprehensible methodological arbitrariness.[195]

Finally, the last validation criterion, notably the *applicability of the aggregation rule (3.3.1)*, is fulfilled by the QDI's methodology. The aggregation formula has been cited explicitly.[196] The applicability of the individual aggregation rules depend on the index construction of the actual constituent democracy indices. These, however, are not directly subject to the evaluation criterion regarding the QDI.

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[195] See 2.3.7 Weighting of Dimensions, 23
[196] See 6.2.2 Aggregation Formula, 84

8 Conclusion

The core of the present diploma thesis was to establish a meta-concept, notably the QD-Index, which combines current democracy indices in order to depict a more valid and more reliable picture of democratic quality on a global scale. In this context, the meta-index should enable the combination of the indices' relative strengths, while reducing their respective weaknesses. The study proceeded as follows:

Firstly, a proper working definition of democracy was derived to serve as the theoretical basis of the subsequent QDI conceptualization. The model focuses on a universalistic conception of political democracy, thus neglecting democracy approaches that emphasize socio-economic preconditions, conducive factors, or output-oriented policy results. The goal was to distill a rather narrow democracy concept that nonetheless enables the differentiated assessment of countries against the backdrop of a democracy continuum without thresholds, hence omitting simplistic dichotomous regime classifications.

In the next stage, the need for the assessment of democratic quality and thus the legitimacy of the present study was stressed. Among other factors, this need arises due to the ever increasing number of democratic political systems, which is resulting from the end of the bipolar world order, the theoretical developments within empirical democracy research, as well as the increasing importance of ODA conditionality clauses.

Of course, the problems concerning theoretical conceptualization and practical operationalization within democratic quality research were discussed in detail. This discussion comprised minimalist vs. maximalist democracy concepts, theoretical universalism vs. cultural relativism, validity and reliability issues, methodological objectivity vs. subjectivity, or the scale construction within the measurement as well as the aggregation stage.

Moreover, there are additional problems, such as the difficulty of determining justifiable thresholds, the weighting of dimensions within the aggregation stage, the often unsatisfactory availability of relevant data, and the challenge of index combination in general. In this context, there have also been discussed two important approaches

within the scientific literature, which aim at validating current democracy indices against the backdrop of these numerous conceptual and practical problems.

Subsequently, three elementary principles of democracy and democratic quality were discussed, notably liberty, equality, and control. Based on this, numerous democracy dimensions were identified, such as the rule of law, civil and political rights, responsiveness, vertical and horizontal accountability, participation, as well as competition. Except for responsiveness, all of these dimensions then were incorporated into the QDI concept.

After the concept had been set up, three current democracy indices, notably the Worldwide Governance Indicators, Freedom House, as well as Vanhanen's Index of Democratization, were presented in terms of their respective theoretical background, development, their dimensions, as well as their methodology. Additionally, a thorough concept validation and a test for their transferability to the QDI were conducted.

The last section of the study dealt with the concrete operationalization of the QDI and thus with the methodological adaptations of its constituent democracy indices for the purpose of their combination. Subsequently, the additive aggregation methodology was made explicit, the QDI country ranking for 2006 was generated and a statistical comparison of the QDI and its constituent indices as well as selected external values was conducted via a Pearson correlation analysis. Finally, the QDI itself was submitted to a detailed validation of its conceptual quality.

8.1 Recapitulation of the Research Question

After having revised the structure of the diploma thesis, the focus of the conclusion shifts towards a more detailed discussion of the study's outcomes. For this purpose, the central research question is recapitulated:

To what extent can an experimental meta-concept, such as the QDI, generate added value in terms of concept quality by combining already existing democracy indices for the purpose of assessing democratic quality on a global scale?

The general answer is that the QDI can deliver added value, because it combines three complementary democracy indices, each of which focuses on different democracy dimensions. The QDI enables a more valid and more reliable assessment of

democratic quality on a global scale, because it mitigates the constituent indices' relative weaknesses, while combining their respective strengths. In order to evaluate the thesis' outcomes more thoroughly, each of the sub questions, posed in the introductory chapter, is dealt with separately.[197]

- What are potential and useful dimensions and indicators for the QDI?

As has been outlined in chapter three, seven major democracy dimensions have been incorporated within the QDI conceptualization process. The scope of dimensions comprises the rule of law, civil liberties, political rights, participation, competition, vertical as well as horizontal accountability. The respective indicators for the dimensions differed according to the methodological design of the constituent indices. However, the problem of incomplete operationalization of the theoretical construct remains, because horizontal and vertical accountability could not be integrated into the operationalized version of the QDI.

Nonetheless, the QDI proves to be of theoretical and practical value. Concretely, the incomplete operationalization underlines the fact that the QDI represents an experimental meta-concept, an approach that is open to further theoretical and practical improvements. Hence, the QDI still represents a work in progress, which allows for the substitution and then integration of additional indices, as long as they meet the methodological criteria.[198]

- Which democracy indices can (cannot) be used for the conceptualization of the QDI?

In general, the indices, which are integrated into the QDI framework, need to be annually updated or allow for their annual replication in order to correspond to the overall goal of setting up a meta-concept for longitudinal studies of democratic quality on a global scale. Additionally, they need to depict at least one of the dimensions the QDI concept is composed of. Ideally, the processed indices are conceptually complementary, as this fact would further increase the utility of the QDI as a meta-index.[199]

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[197] See 1.4 Deduction of the Research Question, 6
[198] See 8.2 Further Research Proposals, 105
[199] See 8.2 Further Research Proposals, 105

In the course of the present study, three democracy indices have been identified that meet all of the criteria mentioned above, notably the World Bank's Worldwide Governance Indicators, Freedom House, and Vanhanen's Index of Democratization. Of course, these indices had to be transformed in order to be integrated into the operationalized version of the QDI concept. All of the indices had to be statistically rescaled via a Z-transformation.[200] In addition, the rule of law had to be excluded from FH's civil liberties dimension and finally, Vanhanen's ID had to be replicated for 2006 due to the lacking of more recent publications. By contrast, some annually updated indices had to be excluded from the analysis, among them for instance the UN Human Development Index (HDI) and the Bertelsmann Transformation Index (BTI). Additionally, concepts that rather remain on a theoretical basis, such as Dahl (1971) or Hadenius (1992) could not be incorporated, either.

- According to the QDI, what does an exemplary country ranking for a specific year (e.g. 2006) look like?

The QDI country ranking 2006 stresses the fact that European countries meet best the distinct criteria of democratic quality. Concretely, there are eight and 18 European countries under the top ten and top 25 ranked countries, respectively. Austria ranks as the 9th country, the USA rank 25th, France is the 32nd country and Russia only obtains rank 125th. Of course, the relative ranks should not be overestimated, especially in case of countries with very similar QDI scores. Additionally, the QDI country ranking represents only a snapshot of democratic quality for 2006, which is also substantially influenced by electoral outcomes of different years. The QDI ranking rather qualifies for revealing trends of global democratic quality developments from a relative perspective. Besides, the dimensional scores must also be taken into account in order to analyze the underlying reasons for specific country rankings.[201]

- What are differences and commonalities of the results generated by the QDI in comparison to its constituent democracy indices as well as external reference values?

The QDI results feature high correlations with the FH scores, which stems from the high inter-correlations among the two FH dimensions, civil liberties and political rights. By contrast, the WGI correlates least with the overall QDI ratings. This may be due to

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[200] See 6.2.1 Z-Transformation, 83
[201] See 6.3 QDI - Country Ranking 2006, 86

the fact that only one indicator, notably rule of law, has been incorporated into the QDI model. Finally, the correlation coefficient of Vanhanen's ID replication ranges in between. This comparatively lower impact on QDI results is due to the lower inter-correlations of Vanhanen's dimensions, competition and participation.[202] With regard to the correlations of the QDI with external values, only mediocre interrelationships can be observed. In other words, there does not seem to be a strong relation between a country's democratic quality, on the one hand, and its economic performance and welfare in terms of GDP per capita and its poluplation's life expectancy, on the other hand.[203]

- What are strengths and weaknesses of the QDI?

The most important strength of the operationalized QDI is the fact that it enables the combination of complementary indices, such as Vanhanen's ID and Freedom House. In this respect, a conceptual flaw of FH can be eliminated, notably that it does measure freedom, rather than democracy. Conversely, the ID's weakness of presupposing civil and political rights as well as the higher result volatility deriving from the electoral indicators can equally be mitigated by the QDI. Finally, WGI's rule of law itself represents a meta-dimension based on various data sources, which in turn also increases the reliability and validity of the QDI.

This combination of theoretically complementary democracy indices enables a more precise evaluation of democratic quality. This measurement improvement is vital to distinct fields, such as the testing of theories within political science or the justification of ODA conditionality clauses.[204] This effect is amplified by the possibility of timely actualization of the QDI as well as the possibility for longitudinal assessments of democratic quality.[205]

Another strength of the QDI is that the index enables polytomous country evaluations by circumventing the fallacy of arbitrary thresholds or bold regime classifications, unlike FH's classification of "free", "partly free", and "not free".[206] In addition, the QDI's construct methodology is made as transparent as possible. Put differently, the index can easily be replicated, because it draws on already existing and easily accessible

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[202] See 6.4.1 Comparison QDI Results vs. Constituent Indices, 89
[203] See 6.4.2 Comparison of QDI Results vs. External Values, 90
[204] See 2.2 The Need for Assessing the Quality of Democracy, 14
[205] See 8.2 Further Research Proposals, 105
[206] See 5.2.2 Dimensions and Methodology, 61

data sources. As a result, the QDI can be updated annually, which once more qualifies it for longitudinal research. Of course, the replication of Vanhanen's ID is slightly more labor-intensive. Due to the objectivity of the indicators, however, the replication can be conducted with relative ease, as well.

Besides the strengths, there are also weaknesses to be considered regarding the setup of the QDI. Probably, the results would be even more reliable, if more indices could be applied for the measurement of the relevant indicators. Of course, the WGI represent an exception, as they already constitute a mixture of 35 different data sources.

Moreover, the integration of Vanhanen's ID also poses some difficulties despite its major advantage of conceptual and methodological parsimoniousness, because electoral results heavily impact overall QDI results.[207] Elections are the only mode of participation taken into account. Other forms, such as referendums, demonstrations, etc. are neglected, which distorts the results to some degree.[208] Especially concerning second round presidential elections, the competition value may rarely be significantly higher than 50 percent.

- Is it meaningful and feasible to combine conceptually and methodologically different democracy indices in the first place?

As has been shown by the WGI, it does make sense to combine democracy indices, which are conceptually heterogeneous and which apply different methodologies.[209] More generally, there is no founded objection to combining various democracy measures. The contrary is the case. On the assumption that each of the indices measures democracy to some extent, their combination into a meta-index should theoretically enable a more reliable approximation to the phenomenon "democracy".

- What about the QDI's own concept quality in terms of its theoretical conceptualization and practical operationalization?

The QDI's reflexive element of the last chapter, notably its own concept validation, is one of the strengths of the present study. In short, the index features both conceptual economicalness and relevance in terms of its scope of dimensions. Additional advantages of the QDI are the scope and the transparent citation of the sources

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[207] See for instance the ranking of France; 6.3 QDI - Country Ranking 2006, 86
[208] See 8.2 Further Research Proposals, 105
[209] See 5.1.2 Dimensions and Methodology, 53

processed, the theoretical foundation of the scale construction, as well as the provision of the disaggregated data. Finally, the theoretical foundation and the applicability of the aggregation rule are ensured.

8.2 Further Research Proposals

As has already been outlined above, the QDI represents an experimental meta-index, which does claim neither theoretical nor practical sanctity. Obviously, there is no full operationalization of the conceptual design of the QDI, because not all QDI dimensions could be operationalized by current democracy indices. This fact is graphically illustrated in figure 18. Due to the fact that vertical and horizontal accountability represent two important democracy dimensions, which equally underscore the relevance of the control principle within democracy conceptions, the QDI still can be improved.
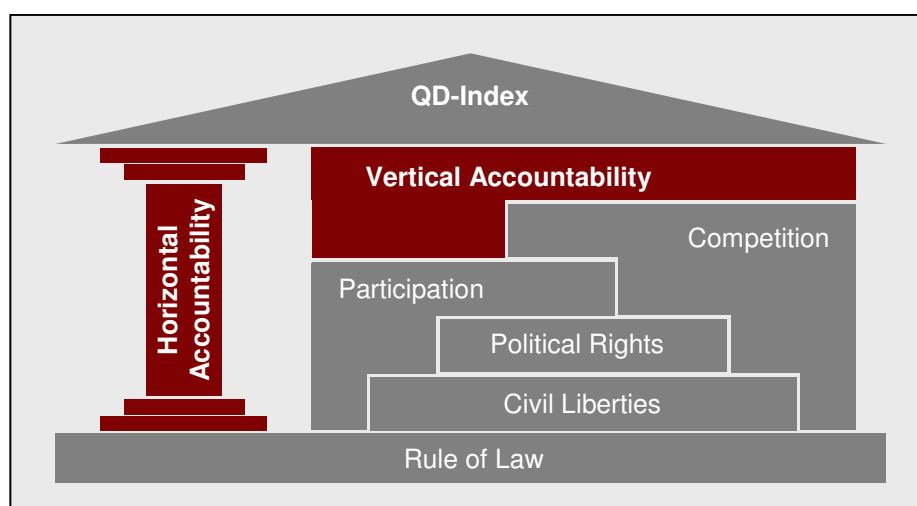
Fig. 18: Non-operationalized QDI Dimensions
(Source: Own illustration)

Besides, there may be integrated additional democracy indices, measuring already operationalized dimensions by providing additional indicators. Hence, the validity and reliability of the country assessments could be further improved, especially concerning participation and competition. As a result, the potential bias of the 70 percent cut-off limit regarding Vanhanen's competition indicator could be mitigated.[210] Equally, additional modes of participation, such as referendums or demonstrations, could be integrated.

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[210] See 5.3.2 Dimensions and Methodology, 69

Apart from this, the QDI has been designed as a continuum measure for democratic quality, explicitly omitting democracy thresholds. Further research could also identify reasonable thresholds for this meta-index. However, the problem of theoretical justifiability of concrete thresholds remains.

In addition, the QDI could serve as a means for longitudinal studies regarding the development of democratic quality. Due to the fact that the WGI do not allow for the identification of global trends[211], it enables the identification and analysis of relative changes in country positions. In this context, the methodology may be improved in order to differentiate among countries that score zero QDI points.[212]

The bottom line is that the QDI represents a valuable conceptual proposal for measuring the quality of democracy on a global scale. Despite the numerous advantages, stemming from combining the constituent indices' strengths, while mitigating their inherent deficits, many starting points for further improvements remain. Nonetheless, index combination constitutes a fruitful new field within empirical democracy research and thus is very likely to become the new focus of future scientific effort in comparative politics.

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[211] See 5.1.2 Dimensions and Methodology, 53
[212] See 6.3 QDI - Country Ranking 2006, 86

Appendix

Table of Appendices

A. Constitution of the QD-Index 2006

Key :

x_WGI_RoL........re-transformed WGI rule of law dimension[213]

x_FH_CL............re-transformed Freedom House civil liberties dimension[214]

x_FH_PR............re-transformed Freedom House political rights dimension[214]

x_V_P ....re-transformed Vanhanen's participation dimension[215]

x_V_C ....re-transformed Vanhanen's competition dimension[215]

QDI.....................QD-Index for 2006[216]

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[213] See Appendix D. Worldwide Governance Indicators – Operationalization for 2006, 114
[214] See Appendix F. Freedom House – Operationalization for 2006, 121
[215] See Appendix G. Vanhanen's Index of Democratization – Replication for 2006, 126
[216] See Tab. 5: Aggregation Formula of the QD-Index, 85

Country	Code	x_WGI_RoL	x_FH_CL	x_FH_PR	x_V_P	x_V_C	QDI
Afghanistan	AFG	5.78	15.00	22.16	38.28	30.52	22.35
Albania	ALB	21.28	28.00	30.40	22.04	39.00	28.14
Algeria	DZA	22.43	20.00	16.67	23.42	25.70	21.64
Angola	AGO	14.91	17.00	13.93	-1.15	5.90	10.12
Argentina	ARG	23.63	38.00	36.80	35.39	44.52	35.67
Armenia	ARM	23.49	22.00	18.50	26.68	35.73	25.28
Australia	AUS	50.68	43.00	42.29	43.42	36.30	43.14
Austria	AUT	51.47	43.00	43.21	35.85	41.07	42.92
Azerbaijan	AZE	19.61	18.00	15.76	22.96	26.64	20.59
Bahamas	BHS	42.78	43.00	41.38	41.36	26.78	39.06
Bahrain	BHR	36.66	16.00	21.25	-1.15	5.90	15.73
Bangladesh	BGD	20.29	25.00	26.74	34.19	33.64	27.97
Barbados	BRB	41.69	43.00	43.21	25.66	24.53	35.62
Belarus	BLR	15.62	8.00	10.27	42.66	15.28	18.37
Belgium	BEL	46.53	43.00	43.21	42.04	44.52	43.86
Belize	BLZ	30.02	39.00	39.55	36.31	25.48	34.07
Benin	BEN	23.09	37.00	36.80	28.40	23.21	29.70
Bhutan	BTN	36.77	17.00	14.84	-1.15	5.90	14.67
Bolivia	BOL	19.37	35.00	32.23	38.68	31.42	31.34
Bosnia-Herzegovina	BIH	23.66	29.00	29.48	24.54	44.52	30.24
Botswana	BWA	37.14	34.00	34.97	34.77	18.48	31.87
Brazil	BRA	24.60	37.00	34.97	37.57	39.89	34.81
Brunei	BRN	33.16	17.00	12.10	-1.15	5.90	13.40
Bulgaria	BGR	27.59	38.00	39.55	25.13	43.11	34.67
Burkina Faso	BFA	23.97	30.00	22.16	26.03	16.74	23.78
Burma (Myanmar)	MMR	13.33	6.00	7.52	-1.15	5.90	6.32
Burundi	BDI	17.75	19.00	26.74	35.25	29.96	25.74
Cambodia	KHM	16.51	22.00	16.67	18.46	18.77	18.48
Cameroon	CMR	17.83	14.00	16.67	36.33	19.56	20.88
Canada	CAN	51.11	44.00	43.21	29.46	39.96	41.55
Cape Verde	CPV	36.94	39.00	40.46	24.39	30.94	34.34
Central African Republic	CAF	11.99	23.00	22.16	31.84	32.22	24.24
Chad	TCD	13.81	15.00	12.10	23.88	25.39	18.04
Chile	CHL	43.36	43.00	42.29	38.65	31.56	39.77
China	CHN	24.18	13.00	8.44	-1.15	5.90	10.07
Colombia	COL	22.91	29.00	30.40	20.08	26.67	25.81
Comoros	COM	19.35	22.00	28.57	25.84	29.06	24.96
Congo (Brazzaville)	COG	15.35	22.00	16.67	34.06	11.74	19.96
Costa Rica	CRI	35.76	40.00	41.38	29.59	38.49	37.04
Cote D'Ivoire	CIV	12.29	13.00	11.18	16.48	28.30	16.25
Croatia	HRV	29.28	39.00	38.63	25.41	32.22	32.91
Cuba	CUB	20.58	5.00	7.52	44.10	5.90	16.62
Cyprus	CYP	40.70	42.00	41.38	40.81	43.61	41.70
Czech Republic	CZE	38.37	43.00	41.38	29.21	40.14	38.42
Denmark	DNK	52.36	43.00	43.21	38.70	44.52	44.36
Djibouti	DJI	22.42	18.00	17.59	21.67	16.18	19.17
Dominican Republic	DOM	23.75	37.00	36.80	33.18	29.56	32.06
DR Congo (Zaire)	ZAR	9.72	12.00	19.42	29.68	29.04	19.97
Ecuador	ECU	17.86	36.00	32.23	34.68	29.80	30.11
Egypt	EGY	28.14	15.00	13.01	26.43	17.31	19.98
El Salvador	SLV	22.99	34.00	36.80	30.03	29.22	30.61
Equatorial Guinea	GNQ	15.42	8.00	7.52	45.04	7.50	16.70
Eritrea	ERI	18.34	8.00	9.35	-1.15	5.90	8.09
Estonia	EST	40.73	42.00	42.29	26.30	44.52	39.17
Ethiopia	ETH	23.28	16.00	19.42	37.78	28.09	24.91
Fiji	FJI	29.01	24.00	13.01	40.33	33.10	27.89
Finland	FIN	52.24	44.00	43.21	32.02	39.59	42.21
France	FRA	45.53	42.00	41.38	31.85	24.49	37.05

Country	Code	x_WGI_RoL	x_FH_CL	x_FH_PR	x_V_P	x_V_C	QDI
Gambia, The	GMB	26.63	24.00	22.16	25.95	16.63	23.08
Georgia	GEO	23.30	30.00	29.48	34.65	17.06	26.90
Germany	DEU	50.43	42.00	42.29	35.45	41.03	42.24
Ghana	GHA	28.94	35.00	40.46	39.08	31.25	34.95
Greece	GRC	37.80	38.00	40.46	34.89	33.38	36.91
Guatemala	GTM	17.40	28.00	28.57	20.90	31.21	25.22
Guinea	GIN	13.32	19.00	14.84	35.23	16.02	19.68
Guinea-Bissau	GNB	14.86	25.00	26.74	35.33	35.75	27.54
Guyana	GUY	22.33	34.00	34.97	31.28	30.73	30.66
Haiti	HTI	12.02	20.00	24.91	26.78	32.82	23.31
Honduras	HND	19.02	30.00	29.48	20.53	33.60	26.53
Hungary	HUN	38.68	42.00	40.46	30.81	35.58	37.50
Iceland	ISL	53.18	44.00	43.21	40.19	42.15	44.54
India	IND	31.72	33.00	37.72	26.07	44.52	34.61
Indonesia	IDN	20.88	28.00	34.06	36.40	38.16	31.50
Iran	IRN	20.45	10.00	15.76	21.68	23.93	18.36
Iraq	IRQ	8.22	11.00	19.42	36.48	36.87	22.40
Ireland	IRL	49.36	43.00	42.29	28.54	36.16	39.87
Israel	ISR	39.05	37.00	40.46	28.80	44.52	37.97
Italy	ITA	34.04	42.00	41.38	38.26	32.09	37.55
Jamaica	JAM	22.91	35.00	34.97	25.62	30.52	29.81
Japan	JPN	46.38	36.00	40.46	30.67	33.52	37.41
Jordan	JOR	35.23	22.00	19.42	18.13	29.92	24.94
Kazakhstan	KAZ	19.21	18.00	15.76	35.04	10.78	19.76
Kenya	KEN	19.00	31.00	29.48	25.81	28.56	26.77
Kuwait	KWT	38.03	20.00	23.99	20.51	24.11	25.33
Kyrgyzstan	KGZ	15.55	25.00	21.25	34.19	12.12	21.62
Laos	LAO	18.93	10.00	7.52	45.89	6.86	17.84
Latvia	LVA	35.68	41.00	39.55	27.17	44.52	37.58
Lebanon	LBN	23.14	29.00	22.16	20.77	30.04	25.02
Lesotho	LSO	26.93	32.00	34.06	30.27	28.23	30.30
Liberia	LBR	18.55	26.00	28.57	31.56	38.32	28.60
Libya	LBY	21.35	7.00	7.52	-1.15	5.90	8.13
Lithuania	LTU	34.90	40.00	39.55	20.49	44.52	35.89
Luxembourg	LUX	50.89	44.00	43.21	42.07	40.08	44.05
Macedonia	MKD	24.02	28.00	28.57	25.05	39.70	29.07
Madagascar	MDG	25.33	27.00	27.65	28.03	30.84	27.77
Malawi	MWI	24.66	26.00	27.65	24.45	41.26	28.81
Malaysia	MYS	36.18	23.00	23.99	33.68	18.80	27.13
Maldives	MDV	31.88	16.00	16.67	35.36	11.26	22.23
Mali	MLI	25.34	34.00	34.06	16.91	25.54	27.17
Malta	MLT	46.91	43.00	42.29	44.55	31.93	41.74
Mauritania	MRT	22.88	23.00	22.16	29.77	38.13	27.19
Mauritius	MUS	38.34	39.00	40.46	37.26	27.97	36.61
Mexico	MEX	23.63	35.00	36.80	26.47	41.27	32.63
Moldova	MDA	22.27	25.00	28.57	31.87	19.86	25.51
Mongolia	MNG	26.23	37.00	36.80	37.41	34.18	34.32
Montenegro	MNP	23.41	33.00	28.57	27.01	29.62	28.32
Morocco	MAR	28.37	22.00	22.16	11.01	29.24	22.56
Mozambique	MOZ	22.35	26.00	29.48	15.98	26.10	23.98
Namibia	NAM	31.62	36.00	34.97	38.77	18.96	32.06
Nepal	NPL	22.58	22.00	22.16	29.86	35.88	26.50
Netherlands	NLD	50.05	44.00	43.21	36.72	44.52	43.70
New Zealand	NZL	51.64	42.00	42.29	37.03	38.24	42.24
Nicaragua	NIC	20.40	32.00	32.23	30.35	40.11	31.02
Niger	NER	20.37	26.00	33.14	20.05	24.92	24.90
Nigeria	NGA	16.00	25.00	25.82	31.41	26.90	25.03
North Korea	PRK	15.63	1.00	6.61	-1.15	5.90	5.60

Country	Code	x_WGI_RoL	x_FH_CL	x_FH_PR	x_V_P	x_V_C	QDI
Norway	NOR	53.21	44.00	43.21	35.35	42.10	43.57
Oman	OMN	38.31	14.00	12.10	-1.15	5.90	13.83
Pakistan	PAK	19.98	20.00	16.67	-1.15	5.90	12.28
Panama	PAN	28.17	38.00	39.55	35.10	34.89	35.14
Papa New Guinea	PNG	19.36	29.00	30.40	34.20	44.52	31.50
Paraguay	PRY	18.32	30.00	30.40	29.11	40.58	29.68
Peru	PER	20.99	33.00	35.89	40.19	32.03	32.42
Philippines	PHL	24.24	33.00	32.23	38.49	39.01	33.39
Poland	POL	32.78	40.00	41.38	20.43	37.79	34.48
Portugal	PRT	40.77	42.00	43.21	28.68	33.53	37.64
Qatar	QAT	40.20	14.00	12.10	-1.15	5.90	14.21
Romania	ROM	27.43	37.00	35.89	25.55	36.61	32.50
Russia	RUS	18.64	19.00	16.67	27.15	29.19	22.13
Rwanda	RWA	22.21	17.00	15.76	44.36	8.63	21.59
Saudi Arabia	SAU	32.12	6.00	7.52	-1.15	5.90	10.08
Senegal	SEN	25.74	34.00	36.80	27.51	28.80	30.57
Serbia	YUG	23.00	38.00	33.14	24.09	37.80	31.21
Sierra Leone	SLE	16.42	29.00	27.65	37.66	21.89	26.53
Singapore	SGP	50.30	24.00	22.16	43.16	27.89	33.50
Slovakia	SVK	34.60	42.00	40.46	21.98	35.93	34.99
Slovenia	SVN	39.03	39.00	41.38	28.49	37.02	36.98
Solomon Islands	SLB	20.27	34.00	27.65	25.72	44.52	30.43
Somalia	SOM	-0.07	3.00	7.52	-1.15	5.90	3.04
South Africa	ZAF	32.64	39.00	38.63	35.02	22.60	33.58
South Korea	KOR	37.82	38.00	39.55	29.68	35.29	36.07
Spain	ESP	42.36	43.00	42.29	35.25	36.19	39.82
Sri Lanka	LKA	30.81	26.00	26.74	34.13	34.47	30.43
Sweden	SWE	51.54	44.00	43.21	37.50	41.14	43.48
Switzerland	CHE	52.48	44.00	43.21	20.27	44.52	40.90
Syria	SYR	22.11	7.00	7.52	34.03	44.52	23.04
Taiwan	TWN	37.85	40.00	37.72	30.31	36.55	36.48
Tajikistan	TJK	17.53	16.00	14.84	42.27	18.91	21.91
Tanzania	TZA	23.77	26.00	26.74	31.47	17.53	25.10
Thailand	THA	29.77	26.00	10.27	24.41	20.01	22.09
Togo	TGO	18.07	18.00	13.93	29.72	19.96	19.93
Trinidad and Tobago	TTO	26.64	39.00	34.97	31.64	31.75	32.80
Tunisia	TUN	33.73	14.00	12.10	40.78	11.83	22.49
Turkey	TUR	29.71	29.00	32.23	26.92	31.78	29.93
Turkmenistan	TKM	13.15	1.00	6.61	-1.15	5.90	5.10
Uganda	UGA	24.00	24.00	20.33	31.46	28.38	25.63
Ukraine	UKR	20.85	34.00	32.23	33.02	36.03	31.23
United Arab Emirates	ARE	37.74	13.00	10.27	-1.15	5.90	13.15
United Kingdom	GBR	50.24	43.00	43.21	27.74	36.13	40.06
United States	USA	48.18	41.00	41.38	26.24	33.10	37.98
Uruguay	URY	34.64	43.00	42.29	40.46	32.41	38.56
Uzbekistan	UZB	13.73	3.00	6.61	43.67	10.37	15.48
Venezuela	VEN	14.01	26.00	24.91	33.76	26.39	25.01
Vietnam	VNM	23.88	15.00	8.44	45.46	5.90	19.74
Yemen	YEM	18.25	15.00	19.42	32.11	20.87	21.13
Zambia	ZMB	21.98	26.00	29.48	32.17	35.61	29.05
Zimbabwe	ZWE	11.65	8.00	10.27	23.28	28.44	16.33

(Source: Own Illustration)

B. Worldwide Governance Indicators - Definitions

Voice and Accountability (VA)	Measuring 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.
Political Stability and Absence of Violence (PV)	Measuring perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including politically-motivated violence and terrorism.
Government Effectiveness (GE)	Measuring perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies.
Regulatory Quality (RQ)	Measuring perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development.
Rule of Law (RL)	Measuring 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.
Control of Corruption (CC)	Measuring 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.

(Source: Kaufmann et al. 2008, 7-8)

C. Worldwide Governance Indicators - Data Sources 2007

Code	Source	Type*	Public	Country Coverage	Representative	1996	1998	2000	2002	2003	2004	2005	2006	2007
ADB	African Development Bank Country Policy and Institutional Assessments	Expert (GOV)	Partial	52								x	x	x
AEO	OECD Development Center African Economic Outlook	Expert (GOV)	Yes	33								x	x	x
AFR	Afrobarometer	Survey	Yes	18		x		x	x		x	x	x	x
ASD	Asian Development Bank Country Policy and Institutional Assessments	Expert (GOV)	Partial	25				x	x	x	x	x	x	x
BPS	Business Enterprise Environment Survey	Survey	Yes	27				x				x		
BRI	Business Environment Risk Intelligence Business Risk Service	Expert (CBIP)	Yes	50		x	x	x	x	x	x	x	x	x
BTI	Bertelsmann Transformation Index	Expert (NGO)	Yes	120					x			x	x	x
CCR	Freedom House Countries at the Crossroads	Expert (NGO)	Yes	63						x	x	x	x	x
DRI	Global Insight Global Risk Service	Expert (CBIP)	Yes	142	x	x	x	x	x	x	x	x	x	x
EBR	European Bank for Reconstruction and Development Transition Report	Expert (GOV)	Yes	29	x	x	x	x	x	x	x	x	x	x
EGV	Global E-Governance Index	Expert (NGO)	Yes	196	x							x	x	x
EIU	Economist Intelligence Unit	Expert (CBIP)	Yes	154	x	x	x	x	x	x	x	x	x	x
FRH	Freedom House	Expert (NGO)	Yes	197	x	x	x	x	x	x	x	x	x	x
GCB	Transparency International Global Corruption Barometer Survey	Survey	Yes	62	x					x	x	x	x	x
GCS	World Economic Forum Global Competitiveness Report	Survey	Yes	125	x	x	x	x	x	x	x	x	x	x
GII	Global Integrity Index	Expert (NGO)	Yes	41	x				x			x	x	x
GWP	Gallup World Poll	Survey	Yes	130	x							x	x	x
HER	Heritage Foundation Index of Economic Freedom	Expert (NGO)	Yes	157	x	x	x	x	x	x	x	x	x	x
HUM	Cingranelli Richards Human Rights Database and Political Terror Scale	Expert (GOV)	Yes	192	x	x	x	x	x	x	x	x	x	x
IFD	IFAD Rural Sector Performance Assessments	Expert (GOV)	Yes	100								x	x	x
IJT	iJET Country Security Risk Ratings	Expert (CBIP)	Yes	187	x						x	x	x	x
IPD	Institutional Profiles Database	Expert (GOV)	Yes	85	x					x	x		x	x
LOB	Latinobarometro	Survey	Yes	18	x	x	x	x	x	x	x	x	x	x
MIG	Merchant International Group Gray Area Dynamics	Expert (CBIP)	Yes	156	x			x		x	x	x	x	x
MSI	International Research and Exchanges Board Media Sustainability Index	Expert (NGO)	Yes	38			x	x	x	x	x	x	x	x
OBI	International Budget Project Open Budget Index	Expert (NGO)	Yes	59								x	x	x
PIA	World Bank Country Policy and Institutional Assessments	Expert (GOV)	Partial	136	x	x	x	x	x	x	x	x	x	x
PRC	Political Economic Risk Consultancy Corruption in Asia Survey	Survey	Yes	12	x	x	x	x	x	x	x	x	x	x
PRS	Political Risk Services International Country Risk Guide	Expert (CBIP)	Yes	140	x	x	x	x	x	x	x	x	x	x
QLM	Business Environment Risk Intelligence Financial Ethics Index	Expert (CBIP)	Yes	115	x	x	x	x	x	x	x	x	x	x
RSF	Reporters Without Borders Press Freedom Index	Expert (GOV)	Yes	166	x		x	x	x	x	x	x	x	x
TPR	US State Department Trafficking in People report	Expert (GOV)	Yes	153	x		x					x	x	x
VAB	Vanderbilt University Americas Barometer	Survey	Yes	22									x	x
WCY	Institute for Management and Development World Competitiveness Yearbook	Survey	Yes	53	x	x	x	x	x	x	x	x	x	x
WMO	Global Insight Business Conditions and Risk Indicators	Expert (CBIP)	Yes	202	x	x	x	x	x	x	x	x	x	x

*CBIP -- Commercial Business Information Provider. GOV -- Public Sector Data Provider. NGO -- Non-Governmental Organization Data Provider

(Source: Kaufmann et al. 2008, 29)

D. Worldwide Governance Indicators – Operationalization for 2006

Key :

N. ....number of data sources processed

WGI=x ....WGI estimates for "rule of law"

z ....z-transformed "WGI=x"-values[217]

x_WGI_RoL........re-transformed z-values[218]

μ_con ....control mean value[219]

σ_con ....control standard deviation[219]

Explanation:

The mean value and the standard deviation (μ=28.16; σ=11.74) of the FH scale is used for the re-transformation calculations.[220]

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[217] See Tab. 3: Formulas for Z-Transformation, 84
[218] See Tab. 4: Re-Transformation of z-values, 84
[219] The z-transformation transforms a random distribution into a distribution with a mean value of zero and a standard deviation of one (Bortz 1999, 756).
[220] See Appendix F. Freedom House – Operationalization for 2006, 121

Country	Code	N.	WGI=x	(x - μ)^2	z	(z - μ_con)^2	x_WGI_RoL
Afghanistan	AFG	10	-2.07	3.70	-1.91	3.64	5.78
Albania	ALB	14	-0.73	0.35	-0.59	0.34	21.28
Algeria	DZA	16	-0.64	0.24	-0.49	0.24	22.43
Angola	AGO	16	-1.28	1.30	-1.13	1.28	14.91
Argentina	ARG	18	-0.53	0.15	-0.39	0.15	23.63
Armenia	ARM	19	-0.54	0.16	-0.40	0.16	23.49
Australia	AUS	13	1.79	3.74	1.92	3.68	50.68
Austria	AUT	13	1.86	4.01	1.99	3.95	51.47
Azerbaijan	AZE	19	-0.88	0.54	-0.73	0.53	19.61
Bahamas	BHS	4	1.11	1.58	1.25	1.55	42.78
Bahrain	BHR	12	0.59	0.53	0.72	0.52	36.66
Bangladesh	BGD	17	-0.82	0.46	-0.67	0.45	20.29
Barbados	BRB	5	1.02	1.35	1.15	1.33	41.69
Belarus	BLR	13	-1.22	1.16	-1.07	1.14	15.62
Belgium	BEL	13	1.43	2.49	1.57	2.45	46.53
Belize	BLZ	8	0.02	0.03	0.16	0.03	30.02
Benin	BEN	15	-0.58	0.19	-0.43	0.19	23.09
Bhutan	BTN	7	0.60	0.55	0.73	0.54	36.77
Bolivia	BOL	18	-0.90	0.57	-0.75	0.56	19.37
Bosnia-Herzegovina	BIH	14	-0.53	0.15	-0.38	0.15	23.66
Botswana	BWA	15	0.63	0.60	0.77	0.59	37.14
Brazil	BRA	20	-0.45	0.09	-0.30	0.09	24.60
Brunei	BRN	3	0.29	0.18	0.43	0.18	33.16
Bulgaria	BGR	18	-0.19	0.00	-0.05	0.00	27.59
Burkina Faso	BFA	16	-0.50	0.13	-0.36	0.13	23.97
Burma (Myanmar)	MMR	11	-1.42	1.62	-1.26	1.60	13.33
Burundi	BDI	13	-1.04	0.80	-0.89	0.79	17.75
Cambodia	KHM	15	-1.14	1.00	-0.99	0.99	16.51
Cameroon	CMR	15	-1.03	0.79	-0.88	0.77	17.83
Canada	CAN	15	1.83	3.89	1.96	3.83	51.11
Cape Verde	CPV	8	0.61	0.57	0.75	0.56	36.94
Central African Republic	CAF	8	-1.53	1.93	-1.38	1.90	11.99
Chad	TCD	13	-1.38	1.52	-1.22	1.50	13.81
Chile	CHL	18	1.16	1.70	1.30	1.68	43.36
China	CHN	17	-0.48	0.12	-0.34	0.12	24.18
Colombia	COL	20	-0.59	0.20	-0.45	0.20	22.91
Comoros	COM	5	-0.90	0.57	-0.75	0.56	19.35
Congo (Brazzaville)	COG	11	-1.24	1.21	-1.09	1.19	15.35
Costa Rica	CRI	16	0.51	0.43	0.65	0.42	35.76
Cote D'Ivoire	CIV	12	-1.51	1.86	-1.35	1.83	12.29
Croatia	HRV	16	-0.05	0.01	0.10	0.01	29.28
Cuba	CUB	12	-0.79	0.42	-0.65	0.42	20.58
Cyprus	CYP	10	0.93	1.16	1.07	1.14	40.70
Czech Republic	CZE	17	0.73	0.77	0.87	0.76	38.37
Denmark	DNK	13	1.94	4.32	2.06	4.25	52.36
Djibouti	DJI	7	-0.64	0.24	-0.49	0.24	22.42
Dominican Republic	DOM	17	-0.52	0.14	-0.38	0.14	23.75
DR Congo (Zaire)	ZAR	12	-1.73	2.51	-1.57	2.47	9.72
Ecuador	ECU	17	-1.03	0.78	-0.88	0.77	17.86
Egypt	EGY	18	-0.14	0.00	0.00	0.00	28.14
El Salvador	SLV	14	-0.59	0.20	-0.44	0.19	22.99
Equatorial Guinea	GNQ	9	-1.24	1.20	-1.09	1.18	15.42
Eritrea	ERI	9	-0.99	0.71	-0.84	0.70	18.34
Estonia	EST	16	0.94	1.17	1.07	1.15	40.73
Ethiopia	ETH	16	-0.56	0.18	-0.42	0.17	23.28
Fiji	FJI	5	-0.07	0.01	0.07	0.01	29.01
Finland	FIN	13	1.93	4.28	2.05	4.21	52.24
France	FRA	14	1.35	2.23	1.48	2.19	45.53

Country	Code	N.	WGI=x	(x - μ)^2	z	(z - μ_con)^2	x_WGI_RoL
Gambia, The	GMB	10	-0.27	0.02	-0.13	0.02	26.63
Georgia	GEO	17	-0.56	0.17	-0.41	0.17	23.30
Germany	DEU	14	1.77	3.66	1.90	3.60	50.43
Ghana	GHA	17	-0.08	0.00	0.07	0.00	28.94
Greece	GRC	14	0.68	0.68	0.82	0.67	37.80
Guatemala	GTM	19	-1.07	0.85	-0.92	0.84	17.40
Guinea	GIN	12	-1.42	1.63	-1.27	1.60	13.32
Guinea-Bissau	GNB	8	-1.29	1.31	-1.13	1.29	14.86
Guyana	GUY	12	-0.64	0.25	-0.50	0.25	22.33
Haiti	HTI	11	-1.53	1.92	-1.38	1.89	12.02
Honduras	HND	17	-0.93	0.62	-0.78	0.61	19.02
Hungary	HUN	18	0.76	0.82	0.90	0.80	38.68
Iceland	ISL	9	2.01	4.62	2.13	4.54	53.18
India	IND	18	0.16	0.09	0.30	0.09	31.72
Indonesia	IDN	20	-0.77	0.39	-0.62	0.38	20.88
Iran	IRN	16	-0.81	0.44	-0.66	0.43	20.45
Iraq	IRQ	8	-1.86	2.93	-1.70	2.89	8.22
Ireland	IRL	13	1.68	3.32	1.81	3.26	49.36
Israel	ISR	14	0.79	0.87	0.93	0.86	39.05
Italy	ITA	14	0.36	0.25	0.50	0.25	34.04
Jamaica	JAM	14	-0.59	0.20	-0.45	0.20	22.91
Japan	JPN	14	1.42	2.45	1.55	2.41	46.38
Jordan	JOR	17	0.46	0.37	0.60	0.36	35.23
Kazakhstan	KAZ	19	-0.91	0.59	-0.76	0.58	19.21
Kenya	KEN	19	-0.93	0.62	-0.78	0.61	19.00
Kuwait	KWT	12	0.70	0.72	0.84	0.71	38.03
Kyrgyzstan	KGZ	18	-1.23	1.17	-1.07	1.15	15.55
Laos	LAO	14	-0.94	0.63	-0.79	0.62	18.93
Latvia	LVA	15	0.50	0.42	0.64	0.41	35.68
Lebanon	LBN	15	-0.57	0.19	-0.43	0.18	23.14
Lesotho	LSO	11	-0.25	0.01	-0.10	0.01	26.93
Liberia	LBR	7	-0.97	0.68	-0.82	0.67	18.55
Libya	LBY	11	-0.73	0.34	-0.58	0.34	21.35
Lithuania	LTU	15	0.44	0.33	0.57	0.33	34.90
Luxembourg	LUX	9	1.81	3.81	1.94	3.75	50.89
Macedonia	MKD	14	-0.50	0.13	-0.35	0.12	24.02
Madagascar	MDG	16	-0.39	0.06	-0.24	0.06	25.33
Malawi	MWI	17	-0.44	0.09	-0.30	0.09	24.66
Malaysia	MYS	18	0.55	0.47	0.68	0.47	36.18
Maldives	MDV	5	0.18	0.10	0.32	0.10	31.88
Mali	MLI	15	-0.39	0.06	-0.24	0.06	25.34
Malta	MLT	8	1.47	2.59	1.60	2.55	46.91
Mauritania	MRT	13	-0.60	0.21	-0.45	0.20	22.88
Mauritius	MUS	13	0.73	0.76	0.87	0.75	38.34
Mexico	MEX	20	-0.53	0.15	-0.39	0.15	23.63
Moldova	MDA	16	-0.65	0.26	-0.50	0.25	22.27
Mongolia	MNG	12	-0.31	0.03	-0.16	0.03	26.23
Montenegro	MNP	9	-0.55	0.17	-0.40	0.16	23.41
Morocco	MAR	17	-0.13	0.00	0.02	0.00	28.37
Mozambique	MOZ	19	-0.64	0.25	-0.50	0.25	22.35
Namibia	NAM	12	0.15	0.09	0.29	0.09	31.62
Nepal	NPL	15	-0.62	0.23	-0.48	0.23	22.58
Netherlands	NLD	13	1.74	3.53	1.86	3.48	50.05
New Zealand	NZL	13	1.87	4.07	2.00	4.00	51.64
Nicaragua	NIC	17	-0.81	0.44	-0.66	0.44	20.40
Niger	NER	13	-0.81	0.45	-0.66	0.44	20.37
Nigeria	NGA	19	-1.19	1.09	-1.04	1.07	16.00
North Korea	PRK	8	-1.22	1.16	-1.07	1.14	15.63

Country	Code	N.	WGI=x	(x - μ)^2	z	(z - μ_con)^2	x_WGI_RoL
Norway	NOR	14	2.01	4.63	2.13	4.56	53.21
Oman	OMN	9	0.73	0.76	0.86	0.75	38.31
Pakistan	PAK	19	-0.85	0.49	-0.70	0.49	19.98
Panama	PAN	16	-0.14	0.00	0.00	0.00	28.17
Papa New Guinea	PNG	12	-0.90	0.57	-0.75	0.56	19.36
Paraguay	PRY	16	-0.99	0.71	-0.84	0.70	18.32
Peru	PER	19	-0.76	0.38	-0.61	0.37	20.99
Philippines	PHL	19	-0.48	0.11	-0.33	0.11	24.24
Poland	POL	18	0.25	0.16	0.39	0.16	32.78
Portugal	PRT	14	0.94	1.17	1.07	1.16	40.77
Qatar	QAT	10	0.89	1.07	1.03	1.05	40.20
Romania	ROM	19	-0.21	0.00	-0.06	0.00	27.43
Russia	RUS	20	-0.96	0.67	-0.81	0.66	18.64
Rwanda	RWA	11	-0.65	0.26	-0.51	0.26	22.21
Saudi Arabia	SAU	13	0.20	0.12	0.34	0.11	32.12
Senegal	SEN	17	-0.35	0.04	-0.21	0.04	25.74
Serbia	YUG	14	-0.59	0.20	-0.44	0.19	23.00
Sierra Leone	SLE	13	-1.15	1.02	-1.00	1.00	16.42
Singapore	SGP	15	1.76	3.61	1.89	3.56	50.30
Slovakia	SVK	16	0.41	0.31	0.55	0.30	34.60
Slovenia	SVN	15	0.79	0.87	0.93	0.86	39.03
Solomon Islands	SLB	4	-0.82	0.46	-0.67	0.45	20.27
Somalia	SOM	4	-2.57	5.88	-2.41	5.79	-0.07
South Africa	ZAF	19	0.24	0.15	0.38	0.15	32.64
South Korea	KOR	16	0.69	0.69	0.82	0.68	37.82
Spain	ESP	14	1.08	1.49	1.21	1.46	42.36
Sri Lanka	LKA	17	0.08	0.05	0.23	0.05	30.81
Sweden	SWE	14	1.87	4.03	1.99	3.97	51.54
Switzerland	CHE	13	1.95	4.36	2.07	4.30	52.48
Syria	SYR	14	-0.66	0.27	-0.52	0.27	22.11
Taiwan	TWN	15	0.69	0.69	0.83	0.68	37.85
Tajikistan	TJK	17	-1.06	0.83	-0.91	0.82	17.53
Tanzania	TZA	17	-0.52	0.14	-0.37	0.14	23.77
Thailand	THA	18	0.00	0.02	0.14	0.02	29.77
Togo	TGO	13	-1.01	0.75	-0.86	0.74	18.07
Trinidad and Tobago	TTO	11	-0.27	0.02	-0.13	0.02	26.64
Tunisia	TUN	15	0.34	0.23	0.47	0.23	33.73
Turkey	TUR	19	-0.01	0.02	0.13	0.02	29.71
Turkmenistan	TKM	10	-1.43	1.66	-1.28	1.64	13.15
Uganda	UGA	19	-0.50	0.13	-0.35	0.13	24.00
Ukraine	UKR	18	-0.77	0.39	-0.62	0.39	20.85
United Arab Emirates	ARE	12	0.68	0.68	0.82	0.67	37.74
United Kingdom	GBR	14	1.75	3.59	1.88	3.54	50.24
United States	USA	14	1.58	2.96	1.71	2.91	48.18
Uruguay	URY	14	0.41	0.31	0.55	0.30	34.64
Uzbekistan	UZB	16	-1.38	1.54	-1.23	1.51	13.73
Venezuela	VEN	19	-1.36	1.48	-1.21	1.45	14.01
Vietnam	VNM	19	-0.51	0.14	-0.37	0.13	23.88
Yemen	YEM	16	-0.99	0.72	-0.84	0.71	18.25
Zambia	ZMB	17	-0.67	0.28	-0.53	0.28	21.98
Zimbabwe	ZWE	19	-1.56	2.01	-1.41	1.98	11.65
			-0.14	169.63	0.00	167.00	
Z-Transformation variables:			μ	∑	μ_con	∑ con	
			1.01		1.00		
			σ		σ_con		

(Source: Own Illustration)

E. Freedom House - Checklist Questions and Guidelines

Each numbered checklist question is assigned a score of 0-4 (except for discretionary question A, for which 1-4 points may be added, and discretionary question B, for which 1-4 points may be subtracted), according to the survey methodology. The bulleted sub-questions are intended to provide guidance to the writers regarding what issues are meant to be considered in scoring each checklist question; the authors do not necessarily have to consider every sub-question when scoring their countries.[221]

Political Rights Checklist

A. Electoral Process

1. Is the head of government or other chief national authority elected through free and fair elections?

2. Are the national legislative representatives elected through free and fair elections?

3. Are the electoral laws and framework fair?

B. Political Pluralism and Participation

1. Do the people have the right to organize in different political parties or other competitive political groupings of their choice, and is the system open to the rise and fall of these competing parties or groupings?

2. Is there a significant opposition vote and a realistic possibility for the opposition to increase its support or gain power through elections?

3. Are the people's political choices free from domination by the military, foreign powers, totalitarian parties, religious hierarchies, economic oligarchies, or any other powerful group?

4. Do cultural, ethnic, religious, or other minority groups have full political rights and electoral opportunities?

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[221] For a complete catalogue of all sub-questions please refer to the Freedom House website: http://www.freedomhouse.org/template.cfm?page=351&ana_page=333&year=2007, [DoR: 23.05.2008]

C. Functioning of Government

1. Do the freely elected head of government and national legislative representatives determine the policies of the government?

2. Is the government free from pervasive corruption?

3. Is the government accountable to the electorate between elections, and does it operate with openness and transparency?

Additional Discretionary Political Rights Questions

A. For traditional monarchies that have no parties or electoral process, does the system provide for genuine, meaningful consultation with the people, encourage public discussion of policy choices, and allow the right to petition the ruler?

B. Is the government or occupying power deliberately changing the ethnic composition of a country or territory so as to destroy a culture or tip the political balance in favor of another group?

Civil Liberties Checklist

D. Freedom of Expression and Belief

1. Are there free and independent media and other forms of cultural expression? (Note: In cases where the media are state-controlled but offer pluralistic points of view, the survey gives the system credit.)

2. Are religious institutions and communities free to practice their faith and express themselves in public and private?

3. Is there academic freedom and is the educational system free of extensive political indoctrination?

4. Is there open and free private discussion?

E. Associational and Organizational Rights

1. Is there freedom of assembly, demonstration, and open public discussion?

2. Is there freedom for nongovernmental organizations? (Note: This includes civic organizations, interest groups, foundations, etc.)

3. Are there free trade unions and peasant organizations or equivalents, and is there effective collective bargaining? Are there free professional and other private organizations?

F. Rule of Law

1. Is there an independent judiciary?

2. Does the rule of law prevail in civil and criminal matters? Are police under direct civilian control?

3. Is there protection from political terror, unjustified imprisonment, exile, or torture, whether by groups that support or oppose the system? Is there freedom from war and insurgencies?

4. Do laws, policies, and practices guarantee equal treatment of various segments of the population?

G. Personal Autonomy and Individual Rights

1. Does the state control travel or choice of residence, employment, or institution of higher education?

2. Do citizens have the right to own property and establish private businesses? Is private business activity unduly influenced by government officials, the security forces, political parties/organizations, or organized crime?

3. Are there personal social freedoms, including gender equality, choice of marriage partners, and size of family?

4. Is there equality of opportunity and the absence of economic exploitation?

F. Freedom House – Operationalization for 2006

Key :

PR......................political rights

CL ....civil liberties

Status.................“F”-free, “PF”-partly free, “NF”-not free

A ....electoral process (max. 12 points)

B ....political pluralism and participation (max. 16 points)

C ....functioning of government (max. 12 points)

D ....freedom of expression and belief (max. 16 points)

E ....associational and organizational rights (max. 12 points)

F.........................rule of law (excluded from calculation) (max. 16 points)

G ....personal autonomy and individual rights (max. 16 points)

PR (A+B+C)=x ...Freedom House political rights dimension, initial values

z ....z-transformed “PR (A+B+C)=x”-values[222]

x_FH_PR ....re-transformed z-values[223]

CL (D+E+G)=x ...Freedom House civil liberties dimension, initial values

z ....z-transformed “CL (D+E+G)=x”-values[222]

x_FH_CL............re-transformed z-values[223]

μ_con ....control mean value[224]

σ_con ....control standard deviation[224]

Eplanation:

The mean value and the standard deviation (μ=28.16; σ=11.74) of the FH scale is used for the re-transformation calculations.[225]

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[222] See Tab. 3: Formulas for Z-Transformation, 84
[223] See Tab. 4: Re-Transformation of z-values, 84
[224] The z-transformation transforms a random distribution into a distribution with a mean value of zero and a standard deviation of one (Bortz 1999, 756).
[225] See Appendix F. Freedom House – Operationalization for 2006, 121

Country	Code	PR	CL	Status	A	B	C	D	E	F	G	PR (A+B+C)=x	(x - μ)^2	z	(z - μ_con)^2	x_FH_PR	CL (D+E+G)=x	(x - μ)^2	z	(z - μ_con)^2	x_FH_CL
Afghanistan	AFG	5	5	PF	6	7	4	5	5	3	5	17	43	-0.51	0.26	22.16	15	173	-1.12	1.26	15.0
Albania	ALB	3	3	PF	8	11	7	11	8	10	9	26	6	0.19	0.04	30.40	28	0	-0.01	0.00	28.0
Algeria	DZA	6	5	NF	4	4	3	7	6	5	7	11	158	-0.98	0.96	16.67	20	67	-0.70	0.48	20.0
Angola	AGO	6	5	NF	2	5	1	8	6	4	3	8	242	-1.21	1.47	13.93	17	125	-0.95	0.90	17.0
Argentina	ARG	2	2	F	11	15	7	14	11	10	13	33	89	0.74	0.54	36.80	38	97	0.84	0.70	38.0
Armenia	ARM	5	4	PF	4	5	4	8	5	6	9	13	111	-0.82	0.68	18.50	22	38	-0.53	0.28	22.0
Australia	AUS	1	1	F	12	15	12	16	12	14	15	39	238	1.20	1.45	42.29	43	220	1.26	1.60	43.0
Austria	AUT	1	1	F	12	16	12	16	12	15	15	40	270	1.28	1.64	43.21	43	220	1.26	1.60	43.0
Azerbaijan	AZE	6	5	NF	3	4	3	7	3	4	8	10	184	-1.06	1.12	15.76	18	103	-0.87	0.75	18.0
Bahamas	BHS	1	1	F	12	16	10	16	12	15	15	38	209	1.13	1.27	41.38	43	220	1.26	1.60	43.0
Bahrain	BHR	5	5	PF	3	9	4	8	3	4	5	16	57	-0.59	0.35	21.25	16	148	-1.04	1.07	16.0
Bangladesh	BGD	4	4	PF	8	10	4	8	8	6	9	22	2	-0.12	0.01	26.74	25	10	-0.27	0.07	25.0
Barbados	BRB	1	1	F	12	16	12	16	12	16	15	40	270	1.28	1.64	43.21	43	220	1.26	1.60	43.0
Belarus	BLR	7	6	NF	0	3	1	3	0	2	5	4	382	-1.52	2.32	10.27	8	406	-1.72	2.95	8.0
Belgium	BEL	1	1	F	12	16	12	16	12	15	15	40	270	1.28	1.64	43.21	43	220	1.26	1.60	43.0
Belize	BLZ	1	2	F	12	14	10	15	11	12	13	36	155	0.97	0.94	39.55	39	117	0.92	0.85	39.0
Benin	BEN	2	2	F	10	15	8	15	12	12	10	33	89	0.74	0.54	36.80	37	78	0.75	0.57	37.0
Bhutan	BTN	6	5	NF	3	1	5	7	2	4	8	9	212	-1.13	1.29	14.84	17	125	-0.95	0.90	17.0
Bolivia	BOL	3	3	PF	11	13	4	15	11	8	9	28	20	0.35	0.12	32.23	35	47	0.58	0.34	35.0
Bosnia-Herzegovina	BIH	3	3	PF	8	11	6	11	8	10	10	25	2	0.11	0.01	29.48	29	1	0.07	0.01	29.0
Botswana	BWA	2	2	F	11	11	9	14	10	13	10	31	55	0.58	0.34	34.97	34	34	0.50	0.25	34.0
Brazil	BRA	2	2	F	11	14	6	15	10	8	12	31	55	0.58	0.34	34.97	37	78	0.75	0.57	37.0
Brunei	BRN	6	5	NF	0	3	3	6	3	6	8	6	308	-1.37	1.87	12.10	17	125	-0.95	0.90	17.0
Bulgaria	BGR	1	2	F	12	15	9	14	11	12	13	36	155	0.97	0.94	39.55	38	97	0.84	0.70	38.0
Burkina Faso	BFA	5	3	PF	5	8	4	14	9	6	7	17	43	-0.51	0.26	22.16	30	3	0.16	0.02	30.0
Burma (Myanmar)	MMR	7	7	NF	0	1	0	2	0	0	4	1	509	-1.76	3.09	7.52	6	491	-1.89	3.57	6.0
Burundi	BDI	3	5	PF	9	9	4	8	5	4	6	22	2	-0.12	0.01	26.74	19	84	-0.78	0.61	19.0
Cambodia	KHM	6	5	NF	3	5	3	9	6	2	7	11	158	-0.98	0.96	16.67	22	38	-0.53	0.28	22.0
Cameroon	CMR	6	6	NF	3	5	3	7	4	2	4	11	158	-0.98	0.96	16.67	14	201	-1.21	1.46	14.0
Canada	CAN	1	1	F	12	16	12	16	12	15	16	40	270	1.28	1.64	43.21	44	251	1.35	1.82	44.0
Cape Verde	CPV	1	1	F	12	15	10	15	11	14	13	37	181	1.05	1.10	40.46	39	117	0.92	0.85	39.0
Central African Republic	CAF	5	4	PF	7	7	3	10	9	3	4	17	43	-0.51	0.26	22.16	23	27	-0.44	0.19	23.0
Chad	TCD	6	5	NF	3	1	2	7	5	1	3	6	308	-1.37	1.87	12.10	15	173	-1.12	1.26	15.0
Chile	CHL	1	1	F	12	15	12	16	12	15	15	39	238	1.20	1.45	42.29	43	220	1.26	1.60	43.0
China	CHN	7	6	NF	0	1	1	4	2	2	7	2	465	-1.68	2.82	8.44	13	230	-1.29	1.67	13.0
Colombia	COL	3	3	PF	10	9	7	12	7	7	10	26	6	0.19	0.04	30.40	29	1	0.07	0.01	29.0
Comoros	COM	3	4	PF	9	11	4	10	6	8	6	24	0	0.03	0.00	28.57	22	38	-0.53	0.28	22.0
Congo (Brazzaville)	COG	6	5	NF	3	5	3	9	7	2	6	11	158	-0.98	0.96	16.67	22	38	-0.53	0.28	22.0
Costa Rica	CRI	1	1	F	12	15	11	16	11	13	15	38	209	1.13	1.27	41.38	40	140	1.01	1.02	40.0
Cote d'Ivoire	CIV	6	6	NF	1	2	2	5	4	3	4	5	344	-1.45	2.09	11.18	13	230	-1.29	1.67	13.0
Croatia	HRV	2	2	F	12	14	9	14	12	11	13	35	131	0.89	0.80	38.63	39	117	0.92	0.85	39.0
Cuba	CUB	7	7	NF	0	0	1	2	1	1	2	1	509	-1.76	3.09	7.52	5	536	-1.97	3.90	5.0
Cyprus	CYP	1	1	F	11	16	11	15	12	15	15	38	209	1.13	1.27	41.38	42	191	1.18	1.39	42.0
Czech Republic	CZE	1	1	F	12	15	11	16	12	14	15	38	209	1.13	1.27	41.38	43	220	1.26	1.60	43.0
Denmark	DNK	1	1	F	12	16	12	16	12	15	15	40	270	1.28	1.64	43.21	43	220	1.26	1.60	43.0
Djibouti	DJI	5	5	PF	4	5	3	7	5	5	6	12	134	-0.90	0.81	17.59	18	103	-0.87	0.75	18.0
Dominican Republic	DOM	2	2	F	11	13	9	15	11	10	11	33	89	0.74	0.54	36.80	37	78	0.75	0.57	37.0

Country	Code	PR	CL	Status	A	B	C	D	E	F	G	PR (A+B+C)=x	(x - μ)^2	z	(z - μ_con)^2	x_FH_PR	CL (D+E+G)=x	(x - μ)^2	z	(z - μ_con)^2	x_FH_CL
DR Congo (Zaire)	ZAR	5	6	NF	6	6	2	6	5	0	1	14	91	-0.75	0.56	19.42	12	261	-1.38	1.90	12.0
Ecuador	ECU	3	3	PF	9	15	4	15	11	5	10	28	20	0.35	0.12	32.23	36	61	0.67	0.45	36.0
Egypt	EGY	7	6	NF	1	4	2	6	2	5	7	7	274	-1.29	1.67	13.01	15	173	-1.12	1.26	15.0
El Salvador	SLV	2	3	F	12	13	8	15	9	7	10	33	89	0.74	0.54	36.80	34	34	0.50	0.25	34.0
Equatorial Guinea	GNQ	7	6	NF	0	1	0	5	0	1	3	1	509	-1.76	3.09	7.52	8	406	-1.72	2.95	8.0
Eritrea	ERI	7	6	NF	0	1	2	2	0	2	6	3	423	-1.60	2.57	9.35	8	406	-1.72	2.95	8.0
Estonia	EST	1	1	F	12	15	12	16	12	14	14	39	238	1.20	1.45	42.29	42	191	1.18	1.39	42.0
Ethiopia	ETH	5	5	PF	5	5	4	7	3	4	6	14	91	-0.75	0.56	19.42	16	148	-1.04	1.07	16.0
Fiji	FJI	6	4	PF	0	5	2	10	4	7	10	7	274	-1.29	1.67	13.01	24	17	-0.35	0.13	24.0
Finland	FIN	1	1	F	12	16	12	16	12	16	16	40	270	1.28	1.64	43.21	44	251	1.35	1.82	44.0
France	FRA	1	1	F	12	15	11	15	12	14	15	38	209	1.13	1.27	41.38	42	191	1.18	1.39	42.0
Gambia	GMB	4	4	PF	6	7	4	10	6	7	8	17	43	-0.51	0.26	22.16	24	17	-0.35	0.13	24.0
Georgia	GEO	3	3	PF	9	9	7	12	8	7	10	25	2	0.11	0.01	29.48	30	3	0.16	0.02	30.0
Germany	DEU	1	1	F	12	15	12	15	12	15	15	39	238	1.20	1.45	42.29	42	191	1.18	1.39	42.0
Ghana	GHA	1	2	F	12	15	10	14	11	12	10	37	181	1.05	1.10	40.46	35	47	0.58	0.34	35.0
Greece	GRC	1	2	F	12	15	10	15	10	14	13	37	181	1.05	1.10	40.46	38	97	0.84	0.70	38.0
Guatemala	GTM	3	4	PF	9	10	5	12	8	5	8	24	0	0.03	0.00	28.57	28	0	-0.01	0.00	28.0
Guinea	GIN	6	5	NF	2	5	2	8	5	4	6	9	212	-1.13	1.29	14.84	19	84	-0.78	0.61	19.0
Guinea-Bissau	GNB	4	4	PF	9	9	4	11	8	8	6	22	2	-0.12	0.01	26.74	25	10	-0.27	0.07	25.0
Guyana	GUY	2	3	PF	11	13	7	15	10	8	9	31	55	0.58	0.34	34.97	34	34	0.50	0.25	34.0
Haiti	HTI	4	5	PF	7	10	3	10	5	2	5	20	13	-0.28	0.08	24.91	20	67	-0.70	0.48	20.0
Honduras	HND	3	3	PF	9	10	6	13	8	7	9	25	2	0.11	0.01	29.48	30	3	0.16	0.02	30.0
Hungary	HUN	1	1	F	12	15	10	16	12	13	14	37	181	1.05	1.10	40.46	42	191	1.18	1.39	42.0
Iceland	ISL	1	1	F	12	16	12	16	12	16	16	40	270	1.28	1.64	43.21	44	251	1.35	1.82	44.0
India	IND	2	3	F	11	14	9	13	10	9	10	34	109	0.81	0.66	37.72	33	23	0.41	0.17	33.0
Indonesia	IDN	2	3	F	11	13	6	10	9	7	9	30	42	0.50	0.25	34.06	28	0	-0.01	0.00	28.0
Iran	IRN	6	6	NF	3	4	3	4	2	3	4	10	184	-1.06	1.12	15.76	10	330	-1.55	2.40	10.0
Iraq	IRQ	5	6	NF	7	6	1	4	3	0	4	14	91	-0.75	0.56	19.42	11	295	-1.46	2.14	11.0
Ireland	IRL	1	1	F	12	16	11	16	12	15	15	39	238	1.20	1.45	42.29	43	220	1.26	1.60	43.0
Israel	ISR	1	2	F	12	15	10	14	12	10	11	37	181	1.05	1.10	40.46	37	78	0.75	0.57	37.0
Italy	ITA	1	1	F	12	15	11	15	12	12	15	38	209	1.13	1.27	41.38	42	191	1.18	1.39	42.0
Jamaica	JAM	2	3	F	10	13	8	15	9	8	11	31	55	0.58	0.34	34.97	35	47	0.58	0.34	35.0
Japan	JPN	1	2	F	12	15	10	13	10	15	13	37	181	1.05	1.10	40.46	36	61	0.67	0.45	36.0
Jordan	JOR	5	4	PF	3	6	5	9	5	6	8	14	91	-0.75	0.56	19.42	22	38	-0.53	0.28	22.0
Kazakhstan	KAZ	6	5	NF	3	4	3	7	4	4	7	10	184	-1.06	1.12	15.76	18	103	-0.87	0.75	18.0
Kenya	KEN	3	3	PF	9	11	5	14	9	8	8	25	2	0.11	0.01	29.48	31	8	0.24	0.06	31.0
Kuwait	KWT	4	5	PF	4	9	6	9	6	7	5	19	21	-0.36	0.13	23.99	20	67	-0.70	0.48	20.0
Kyrgyzstan	KGZ	5	4	PF	5	7	4	10	8	5	7	16	57	-0.59	0.35	21.25	25	10	-0.27	0.07	25.0
Laos	LAO	7	6	NF	0	1	0	4	1	2	5	1	509	-1.76	3.09	7.52	10	330	-1.55	2.40	10.0
Latvia	LVA	1	1	F	12	15	9	16	12	12	13	36	155	0.97	0.94	39.55	41	165	1.09	1.20	41.0
Lebanon	LBN	4	4	PF	4	8	5	12	8	5	9	17	43	-0.51	0.26	22.16	29	1	0.07	0.01	29.0
Lesotho	LSO	2	3	F	9	12	9	15	8	11	9	30	42	0.50	0.25	34.06	32	15	0.33	0.11	32.0
Liberia	LBR	3	4	PF	9	10	5	11	7	7	8	24	0	0.03	0.00	28.57	26	5	-0.18	0.03	26.0
Libya	LBY	7	7	NF	0	1	0	1	0	0	6	1	509	-1.76	3.09	7.52	7	448	-1.80	3.25	7.0
Lithuania	LTU	1	1	F	12	15	9	16	11	14	13	36	155	0.97	0.94	39.55	40	140	1.01	1.02	40.0
Luxembourg	LUX	1	1	F	12	16	12	16	12	16	16	40	270	1.28	1.64	43.21	44	251	1.35	1.82	44.0
Macedonia	MKD	3	3	PF	7	10	7	11	7	8	10	24	0	0.03	0.00	28.57	28	0	-0.01	0.00	28.0

Country	Code	PR	CL	Status	A	B	C	D	E	F	G	PR (A+B+C)=x	(x - μ)^2	z	(z - μ_con)^2	x_FH_PR	CL (D+E+G)=x	(x - μ)^2	z	(z - μ_con)^2	x_FH_CL
Madagascar	MDG	3	3	PF	7	9	7	10	8	9	9	23	0	-0.04	0.00	27.65	27	1	-0.10	0.01	27.0
Malawi	MWI	4	3	PF	7	10	6	11	8	9	7	23	0	-0.04	0.00	27.65	26	5	-0.18	0.03	26.0
Malaysia	MYS	4	4	PF	6	7	6	8	6	6	9	19	21	-0.36	0.13	23.99	23	27	-0.44	0.19	23.0
Maldives	MDV	6	5	NF	3	4	4	6	3	7	7	11	158	-0.98	0.96	16.67	16	148	-1.04	1.07	16.0
Mali	MLI	2	2	F	9	12	9	16	9	10	9	30	42	0.50	0.25	34.06	34	34	0.50	0.25	34.0
Malta	MLT	1	1	F	12	16	11	16	12	16	15	39	238	1.20	1.45	42.29	43	220	1.26	1.60	43.0
Mauritania	MRT	5	4	PF	6	7	4	10	8	6	5	17	43	-0.51	0.26	22.16	23	27	-0.44	0.19	23.0
Mauritius	MUS	1	2	F	11	15	11	15	12	13	12	37	181	1.05	1.10	40.46	39	117	0.92	0.85	39.0
Mexico	MEX	2	2	F	10	14	9	14	10	8	11	33	89	0.74	0.54	36.80	35	47	0.58	0.34	35.0
Moldova	MDA	3	4	PF	9	8	7	10	6	8	9	24	0	0.03	0.00	28.57	25	10	-0.27	0.07	25.0
Mongolia	MNG	2	2	F	8	15	10	15	10	12	12	33	89	0.74	0.54	36.80	37	78	0.75	0.57	37.0
Montenegro	MNP	3	3	PF	9	9	6	12	10	8	11	24	0	0.03	0.00	28.57	33	23	0.41	0.17	33.0
Morocco	MAR	5	4	PF	4	7	6	8	6	6	8	17	43	-0.51	0.26	22.16	22	38	-0.53	0.28	22.0
Mozambique	MOZ	3	4	PF	7	11	7	11	7	7	8	25	2	0.11	0.01	29.48	26	5	-0.18	0.03	26.0
Namibia	NAM	2	2	F	10	12	9	15	12	10	9	31	55	0.58	0.34	34.97	36	61	0.67	0.45	36.0
Nepal	NPL	5	4	PF	4	9	4	9	6	6	7	17	43	-0.51	0.26	22.16	22	38	-0.53	0.28	22.0
Netherlands	NLD	1	1	F	12	16	12	16	12	15	16	40	270	1.28	1.64	43.21	44	251	1.35	1.82	44.0
New Zealand	NZL	1	1	F	12	15	12	16	11	15	15	39	238	1.20	1.45	42.29	42	191	1.18	1.39	42.0
Nicaragua	NIC	3	3	PF	11	12	5	14	8	7	10	28	20	0.35	0.12	32.23	32	15	0.33	0.11	32.0
Niger	NER	3	3	PF	11	10	8	11	9	9	6	29	30	0.42	0.18	33.14	26	5	-0.18	0.03	26.0
Nigeria	NGA	4	4	PF	6	9	6	11	7	5	7	21	7	-0.20	0.04	25.82	25	10	-0.27	0.07	25.0
North Korea	PRK	7	7	NF	0	0	0	0	0	0	1	0	555	-1.84	3.37	6.61	1	738	-2.31	5.36	1.0
Norway	NOR	1	1	F	12	16	12	16	12	16	16	40	270	1.28	1.64	43.21	44	251	1.35	1.82	44.0
Oman	OMN	6	5	NF	2	2	2	6	3	4	5	6	308	-1.37	1.87	12.10	14	201	-1.21	1.46	14.0
Pakistan	PAK	6	5	NF	2	6	3	8	6	4	6	11	158	-0.98	0.96	16.67	20	67	-0.70	0.48	20.0
Panama	PAN	1	2	F	12	15	9	15	11	9	12	36	155	0.97	0.94	39.55	38	97	0.84	0.70	38.0
Papua New Guinea	PNG	3	3	PF	9	11	6	12	9	7	8	26	6	0.19	0.04	30.40	29	1	0.07	0.01	29.0
Paraguay	PRY	3	3	PF	11	11	4	12	8	7	10	26	6	0.19	0.04	30.40	30	3	0.16	0.02	30.0
Peru	PER	2	3	F	11	14	7	15	9	8	9	32	71	0.66	0.43	35.89	33	23	0.41	0.17	33.0
Philippines	PHL	3	3	PF	7	13	8	14	9	8	10	28	20	0.35	0.12	32.23	33	23	0.41	0.17	33.0
Poland	POL	1	1	F	12	16	10	15	11	13	14	38	209	1.13	1.27	41.38	40	140	1.01	1.02	40.0
Portugal	PRT	1	1	F	12	16	12	16	12	15	14	40	270	1.28	1.64	43.21	42	191	1.18	1.39	42.0
Qatar	QAT	6	5	NF	2	1	3	8	2	4	4	6	308	-1.37	1.87	12.10	14	201	-1.21	1.46	14.0
Romania	ROM	2	2	F	11	14	7	14	11	12	12	32	71	0.66	0.43	35.89	37	78	0.75	0.57	37.0
Russia	RUS	6	5	NF	3	5	3	8	4	4	7	11	158	-0.98	0.96	16.67	19	84	-0.78	0.61	19.0
Rwanda	RWA	6	5	NF	3	3	4	7	3	6	7	10	184	-1.06	1.12	15.76	17	125	-0.95	0.90	17.0
Saudi Arabia	SAU	7	6	NF	0	0	1	4	0	3	2	1	509	-1.76	3.09	7.52	6	491	-1.89	3.57	6.0
Senegal	SEN	2	3	F	11	13	9	15	10	9	9	33	89	0.74	0.54	36.80	34	34	0.50	0.25	34.0
Serbia	YUG	3	2	F	9	13	7	14	11	9	13	29	30	0.42	0.18	33.14	38	97	0.84	0.70	38.0
Sierra Leone	SLE	4	3	PF	9	10	4	12	8	8	9	23	0	-0.04	0.00	27.65	29	1	0.07	0.01	29.0
Singapore	SGP	5	4	PF	4	6	7	9	3	8	12	17	43	-0.51	0.26	22.16	24	17	-0.35	0.13	24.0
Slovakia	SVK	1	1	F	12	15	10	16	12	12	14	37	181	1.05	1.10	40.46	42	191	1.18	1.39	42.0
Slovenia	SVN	1	1	F	12	15	11	15	12	14	12	38	209	1.13	1.27	41.38	39	117	0.92	0.85	39.0
Solomon Islands	SLB	4	3	PF	6	10	7	13	9	8	12	23	0	-0.04	0.00	27.65	34	34	0.50	0.25	34.0
Somalia	SOM	7	7	NF	0	0	1	3	0	0	0	1	509	-1.76	3.09	7.52	3	633	-2.14	4.60	3.0
South Africa	ZAF	2	2	F	12	14	9	15	12	12	12	35	131	0.89	0.80	38.63	39	117	0.92	0.85	39.0
South Korea	KOR	1	2	F	11	15	10	14	12	13	12	36	155	0.97	0.94	39.55	38	97	0.84	0.70	38.0

Country	Code	PR	CL	Status	A	B	C	D	E	F	G	PR (A+B+C)=x	(x − μ)^2	z	(z − μ_con)^2	x_FH_PR	CL (D+E+G)=x	(x − μ)^2	z	(z − μ_con)^2	x_FH_CL
Spain	ESP	1	1	F	12	15	12	16	12	14	15	39	238	1.20	1.45	42.29	43	220	1.26	1.60	43.0
Sri Lanka	LKA	4	4	PF	8	8	6	8	9	6	9	22	2	−0.12	0.01	26.74	26	5	−0.18	0.03	26.0
Sweden	SWE	1	1	F	12	16	12	16	12	16	16	40	270	1.28	1.64	43.21	44	251	1.35	1.82	44.0
Switzerland	CHE	1	1	F	12	16	12	16	12	15	16	40	270	1.28	1.64	43.21	44	251	1.35	1.82	44.0
Syria	SYR	7	7	NF	0	0	1	2	0	1	5	1	509	−1.76	3.09	7.52	7	448	−1.80	3.25	7.0
Taiwan	TWN	2	1	F	10	15	9	16	11	15	13	34	109	0.81	0.66	37.72	40	140	1.01	1.02	40.0
Tajikistan	TJK	6	5	NF	2	4	3	6	4	4	6	9	212	−1.13	1.29	14.84	16	148	−1.04	1.07	16.0
Tanzania	TZA	4	3	PF	6	10	6	11	7	10	8	22	2	−0.12	0.01	26.74	26	5	−0.18	0.03	26.0
Thailand	THA	7	4	PF	0	1	3	10	5	6	11	4	382	−1.52	2.32	10.27	26	5	−0.18	0.03	26.0
Togo	TGO	6	5	NF	2	4	2	7	5	3	6	8	242	−1.21	1.47	13.93	18	103	−0.87	0.75	18.0
Trinidad & Tobago	TTO	2	2	F	9	13	9	15	11	10	13	31	55	0.58	0.34	34.97	39	117	0.92	0.85	39.0
Tunisia	TUN	6	5	NF	1	3	2	4	2	4	8	6	308	−1.37	1.87	12.10	14	201	−1.21	1.46	14.0
Turkey	TUR	3	3	PF	9	12	7	12	7	8	10	28	20	0.35	0.12	32.23	29	1	0.07	0.01	29.0
Turkmenistan	TKM	7	7	NF	0	0	0	1	0	0	0	0	555	−1.84	3.37	6.61	1	738	−2.31	5.36	1.0
Uganda	UGA	5	4	PF	4	7	4	11	6	7	7	15	73	−0.67	0.45	20.33	24	17	−0.35	0.13	24.0
Ukraine	UKR	3	2	PF	9	13	6	13	10	11	11	28	20	0.35	0.12	32.23	34	34	0.50	0.25	34.0
United Arab Emirates	ARE	6	6	NF	1	1	2	6	3	4	4	4	382	−1.52	2.32	10.27	13	230	−1.29	1.67	13.0
United Kingdom	GBR	1	1	F	12	16	12	16	12	15	15	40	270	1.28	1.64	43.21	43	220	1.26	1.60	43.0
United States of America	USA	1	1	F	11	16	11	16	10	14	15	38	209	1.13	1.27	41.38	41	165	1.09	1.20	41.0
Uruguay	URY	1	1	F	12	16	11	16	12	15	15	39	238	1.20	1.45	42.29	43	220	1.26	1.60	43.0
Uzbekistan	UZB	7	7	NF	0	0	0	1	0	0	2	0	555	−1.84	3.37	6.61	3	633	−2.14	4.60	3.0
Venezuela	VEN	4	4	PF	8	8	4	11	7	5	8	20	13	−0.28	0.08	24.91	26	5	−0.18	0.03	26.0
Vietnam	VNM	7	5	NF	0	1	1	5	2	4	8	2	465	−1.68	2.82	8.44	15	173	−1.12	1.26	15.0
Yemen	YEM	5	5	PF	4	7	3	7	3	4	5	14	91	−0.75	0.56	19.42	15	173	−1.12	1.26	15.0
Zambia	ZMB	4	4	PF	8	11	6	11	8	8	7	25	2	0.11	0.01	29.48	26	5	−0.18	0.03	26.0
Zimbabwe	ZWE	7	6	NF	1	3	0	5	2	1	1	4	382	−1.52	2.32	10.27	8	406	−1.72	3	8.0
												23.56	27475.21	0.00	167.00		28.16	22998.63	0.00	167.00	
												μ	∑	μ_con	∑_con		μ	∑	μ_con	∑_con	
												12.83		1.00			11.74		1.00		
												σ		σ_con			σ		σ_con		

Z-Transformation variables:

(Source: Own Illustration)

G. Vanhanen's Index of Democratization – Replication for 2006

Key :

Parl.....................parliamentary dominance

Exec...................executive dominance

P=x.....................Vanhanen's participation indicator, (0-100%), initial values

z ....z-transformed "P=x"-values[226]

x_V_P ....re-transformed z-values[227]

LP % ....largest party's share

SP %...................smaller parties' share

LPS ....number of seats of largest party in parliament

TS ....number of total seats in parliament

SS %...................smaller parties' share of seats in parliament, [(TS-LPS)/TS]

MPC %...............mean parliamentary competition, [SP%; SS%; (SP%+SS%)/2]

ELP %.................executive largest party's share

EC %...................executive competition, [1-ELP%]

TC %...................total competition, [MPC%; EC%; (MPC%+EC%)/2], (0-100%)

C=x ....Vanhanen's competition indicator, (0-70%)

z ....z-transformed "C=x"-values[226]

x_V_C ....re-transformed z-values[227]

Angola................country values taken over from Vanhanen (2003)

Burundi...............country values explicitly differing from Vanhanen (2003)

μ_con ....control mean value[228]

σ_con ....control standard deviation[228]

Eplanation:

The mean value and the standard deviation (μ=28.16; σ=11.74) of the FH scale is used for the re-transformation calculations.[229]

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[226] See Tab. 3: Formulas for Z-Transformation, 84
[227] See Tab. 4: Re-Transformation of z-values, 84
[228] The z-transformation transforms a random distribution into a distribution with a mean value of zero and a standard deviation of one (Bortz 1999, 756).
[229] See Appendix F. Freedom House – Operationalization for 2006, 121

Source:

a........................www.electionguide.org

b........................www.parties-and-elections.de

c........................Vanhanen (2003)

d........................africanelections.tripod.com

e........................www.cia.gov/library/publications/the-world-factbook

f........................www.idea.int/vt

g........................psephos.adam-carr.net

h........................www.worldpress.org

i........................library.fes.de/pdf-files/bueros/ghana/03610.pdf

j........................english.aljazeera.net

k........................www.unrisd.org

l........................www.europeanforum.net

m........................www.presidency.ucsb.edu

n........................www.npr.org

Country	Code	Year	Election Type	Parl.	Exec.	P=x	(x - μ)^2	z	(z - μ_con)^2	x_V_P	Party	LP %
Afghanistan	AFG	2004	Executive		83.7%	83.7%	0.05	0.86	0.74	38.3		
Albania	ALB	2005	Parliamentary	49.2%		49.2%	0.02	-0.52	0.27	22.0	Democratic Party	
Algeria	DZA	2002/2004	CP (50%-50%)	46.2%	58.1%	52.1%	0.01	-0.40	0.16	23.4	National Liberation Front	35.3%
Angola	AGO	1992	Executive		0.0%	0.0%	0.39	-2.50	6.24	-1.1		
Argentina	ARG	2003	Executive		77.5%	77.5%	0.02	0.62	0.38	35.4		
Armenia	ARM	2003/2003	CP (50%-50%)	51.1%	67.0%	59.0%	0.00	-0.13	0.02	26.7	Republican Party of Armenia	23.7%
Australia	AUS	2004	Parliamentary	94.6%		94.6%	0.10	1.30	1.69	43.4	Liberal Party of Australia	40.5%
Austria	AUT	2006	Parliamentary	78.5%		78.5%	0.03	0.65	0.43	35.8	Social Democratic Party	35.3%
Azerbaijan	AZE	2005/2003	CP (50%-50%)	40.5%	61.8%	51.1%	0.01	-0.44	0.20	23.0	New Azerbaijan Party	
Bahamas	BHS	2002	Parliamentary	90.2%		90.2%	0.08	1.12	1.26	41.4	Progressive Liberal Party	51.8%
Bahrain	BHR	1999	Executive		0.0%	0.0%	0.39	-2.50	6.24	-1.1		
Bangladesh	BGD	2001	Parliamentary	75.0%		75.0%	0.02	0.51	0.26	34.2	Bangladesh Nationalist Party	41.0%
Barbados	BRB	2003	Parliamentary	56.9%		56.9%	0.00	-0.21	0.05	25.7	Barbados Labor Party	55.8%
Belarus	BLR	2006	Executive		92.9%	92.9%	0.09	1.24	1.53	42.7		
Belgium	BEL	2003	Parliamentary	91.6%		91.6%	0.09	1.18	1.40	42.0	Flemish Liberal Democrats	15.4%
Belize	BLZ	2003	Parliamentary	79.5%		79.5%	0.03	0.69	0.48	36.3	People's United Party	53.2%
Benin	BEN	2003/2006	CP (50%-50%)	55.9%	69.5%	62.7%	0.00	0.02	0.00	28.4	Presidential Movement	
Bhutan	BTN	2006	Executive		0.0%	0.0%	0.39	-2.50	6.24	-1.1		
Bolivia	BOL	2005	Executive		84.5%	84.5%	0.05	0.90	0.80	38.7		
Bosnia and Herzegovina	BIH	2006	Parliamentary	54.5%		54.5%	0.01	-0.31	0.10	24.5	Alliance of Ind. Social Democrats	19.1%
Botswana	BWA	2004	Parliamentary	76.2%		76.2%	0.02	0.56	0.32	34.8	Botswana Democratic Party	
Brazil	BRA	2006/2006	CP (50%-50%)	83.3%	81.0%	82.2%	0.04	0.80	0.64	37.6	Party of the Brazilian Dem.Movement	14.6%
Brunei	BRN	1967	Executive		0.0%	0.0%	0.39	-2.50	6.24	-1.1		
Bulgaria	BGR	2005	Parliamentary	55.8%		55.8%	0.00	-0.26	0.07	25.1	Coalition for Bulgaria	31.0%
Burkina Faso	BFA	2005	Executive		57.7%	57.7%	0.00	-0.18	0.03	26.0		
Burma (Myanmar)	MMR	1988	Executive		0.0%	0.0%	0.39	-2.50	6.24	-1.1		
Burundi	BDI	2005	Parliamentary	77.2%		77.2%	0.02	0.60	0.37	35.3	National Council for the Defense of Dem.	58.6%
Cambodia	KHM	2003/1993	CP (50%-50%)	83.2%	0.0%	41.6%	0.04	-0.83	0.68	18.5	Cambodian People's Party	47.4%
Cameroon	CMR	2004	Executive		79.5%	79.5%	0.03	0.70	0.48	36.3		
Canada	CAN	2006	Parliamentary	64.9%		64.9%	0.00	0.11	0.01	29.5	Conservative Party of Canada	36.3%
Cape Verde	CPV	2006	Parliamentary	54.2%		54.2%	0.01	-0.32	0.10	24.4	African Party for Ind. of Cape Verde	52.3%
Central African Republic	CAF	2005/2005	CP (50%-50%)	72.7%	67.3%	70.0%	0.01	0.31	0.10	31.8	National Convergence "Kwa Na Kwa"	
Chad	TCD	2006	Executive		53.1%	53.1%	0.01	-0.36	0.13	23.9		
Chile	CHL	2006	Executive		84.4%	84.4%	0.05	0.89	0.80	38.6		

Country	Code	Year	SP %	LPS	TS	SS%	MPC %	Executive	ELP %	EC %	TC %	C=x	(x - μ)^2	z	(z - μ_con)^2	x_V_C	Source
Afghanistan	AFG	2004						KARZAI	55.4%	44.6%	44.6%	44.6%	0.00	0.20	0.04	30.52	a
Albania	ALB	2005		56	140	60.0%	60.0%				60.0%	60.0%	0.04	0.92	0.85	39.00	b
Algeria	DZA	2002/2004	64.7%	199	389	48.8%	56.8%	BOUTEFLIKA	85.0%	15.0%	35.9%	35.9%	0.00	-0.21	0.04	25.70	a
Angola	AGO	1992						DOS SANTOS	100.0%	0.0%	0.0%	0.0%	0.16	-1.90	3.60	5.90	c/d
Argentina	ARG	2003						MENEM	24.3%	75.7%	75.7%	70.0%	0.09	1.39	1.94	44.52	a
Armenia	ARM	2003/2003	76.3%	33	131	74.8%	75.6%	KOCHARIA	67.5%	32.6%	54.1%	54.1%	0.02	0.64	0.42	35.73	a
Australia	AUS	2004	59.5%	74	150	50.7%	55.1%				55.1%	55.1%	0.02	0.69	0.48	36.30	a
Austria	AUT	2006	64.7%	68	183	62.8%	63.8%				63.8%	63.8%	0.05	1.10	1.21	41.07	a
Azerbaijan	AZE	2005/2003		60	125	52.0%	52.0%	ALIYEV	76.8%	23.2%	37.6%	37.6%	0.00	-0.13	0.02	26.64	e/a/f
Bahamas	BHS	2002	48.2%	29	40	27.5%	37.9%				37.9%	37.9%	0.00	-0.12	0.01	26.78	a
Bahrain	BHR	1999						HAMAD	100.0%	0.0%	0.0%	0.0%	0.16	-1.90	3.60	5.90	c/e
Bangladesh	BGD	2001	59.0%	193	330	41.5%	50.3%				50.3%	50.3%	0.01	0.47	0.22	33.64	a
Barbados	BRB	2003	44.2%	23	30	23.3%	33.8%				33.8%	33.8%	0.00	-0.31	0.10	24.53	a
Belarus	BLR	2006						LUKASHENKO	83.0%	17.0%	17.0%	17.0%	0.05	-1.10	1.21	15.28	a
Belgium	BEL	2003	84.6%	25	150	83.3%	84.0%				84.0%	70.0%	0.09	1.39	1.94	44.52	a
Belize	BLZ	2003	46.8%	22	29	24.1%	35.5%				35.5%	35.5%	0.00	-0.23	0.05	25.48	a
Benin	BEN	2003/2006		52	83	37.3%	37.3%	YAYI	74.6%	25.4%	31.4%	31.4%	0.01	-0.42	0.18	23.21	d/e
Bhutan	BTN	2006						WANGCHUCK	100.0%	0.0%	0.0%	0.0%	0.16	-1.90	3.60	5.90	c/e
Bolivia	BOL	2005						MORALES	53.7%	46.3%	46.3%	46.3%	0.00	0.28	0.08	31.42	a
Bosnia and Herzegovina	BIH	2006	80.9%	7	42	83.3%	82.1%				82.1%	70.0%	0.09	1.39	1.94	44.52	b
Botswana	BWA	2004		44	57	22.8%	22.8%				22.8%	22.8%	0.03	-0.82	0.68	18.48	d
Brazil	BRA	2006/2006	85.4%	89	513	82.7%	84.0%	DA SILVA	60.8%	39.2%	61.6%	61.6%	0.05	1.00	1.00	39.89	f/g
Brunei	BRN	1967						BOLKIAH	100.0%	0.0%	0.0%	0.0%	0.16	-1.90	3.60	5.90	c/e
Bulgaria	BGR	2005	69.1%	82	240	65.8%	67.4%				67.4%	67.4%	0.07	1.27	1.62	43.11	a
Burkina Faso	BFA	2005						COMPAORE	80.4%	19.7%	19.7%	19.7%	0.04	-0.97	0.95	16.74	a
Burma (Myanmar)	MMR	1988						THAN SHWE	100.0%	0.0%	0.0%	0.0%	0.16	-1.90	3.60	5.90	c/e
Burundi	BDI	2005	41.5%	64	118	45.8%	43.6%				43.6%	43.6%	0.00	0.15	0.02	29.96	d/e
Cambodia	KHM	2003/1993	52.7%	73	123	40.7%	46.7%	SIHAMONI	100.0%	0.0%	23.3%	23.3%	0.03	-0.80	0.64	18.77	c/a
Cameroon	CMR	2004						BIYA	75.2%	24.8%	24.8%	24.8%	0.02	-0.73	0.54	19.56	a
Canada	CAN	2006	63.8%	124	308	59.7%	61.7%				61.7%	61.7%	0.05	1.01	1.01	39.96	a
Cape Verde	CPV	2006	47.7%	41	72	43.1%	45.4%				45.4%	45.4%	0.00	0.24	0.06	30.94	a
Central African Republic	CAF	2005/2005		42	105	60.0%	60.0%	BOZIZE	64.6%	35.4%	47.7%	47.7%	0.01	0.35	0.12	32.22	d/e/f
Chad	TCD	2006						ITNO	64.7%	35.3%	35.3%	35.3%	0.00	-0.24	0.06	25.39	d
Chile	CHL	2006						BACHELET	53.5%	46.5%	46.5%	46.5%	0.00	0.29	0.08	31.56	a/e

Country	Code	Year	Election Type	Parl.	Exec.	P=x	(x - μ)^2	z	(z - μ_con)^2	x_V_P	Party	LP %
China	CHN	2003	Parliamentary	0.0%		0.0%	0.39	-2.50	6.24	-1.1	Chinese Communist Party	100.0%
Colombia	COL	2006	Executive		45.1%	45.1%	0.03	-0.69	0.47	20.1		
Comoros	COM	2006	Executive		57.3%	57.3%	0.00	-0.20	0.04	25.8		
Congo (Brazzaville)	COG	2002	Executive		74.7%	74.7%	0.02	0.50	0.25	34.1		
Costa Rica	CRI	2006	Executive		65.2%	65.2%	0.00	0.12	0.01	29.6		
Cote D'Ivoire	CIV	2000	Executive		37.4%	37.4%	0.06	-1.00	0.99	16.5		
Croatia	HRV	2003/2005	CP (50%-50%)	61.7%	51.0%	56.3%	0.00	-0.23	0.06	25.4	Croatian Democratic Union	33.9%
Cuba	CUB	2003	Parliamentary	96.0%		96.0%	0.11	1.36	1.84	44.1	Cuban Communist Party	100.0%
Cyprus	CYP	2006	Parliamentary	89.0%		89.0%	0.07	1.08	1.16	40.8	Progessive P. for the Working People	31.2%
Czech Republic	CZE	2006	Parliamentary	64.4%		64.4%	0.00	0.09	0.01	29.2	Civic Democratic Party	35.4%
Denmark	DNK	2005	Parliamentary	84.5%		84.5%	0.05	0.90	0.81	38.7	Liberal Party	29.0%
Djibouti	DJI	2003	Parliamentary	48.4%		48.4%	0.02	-0.55	0.31	21.7	Union for a Presidential Majority	62.7%
Dominican Republic	DOM	2004	Executive		72.8%	72.8%	0.01	0.43	0.18	33.2		
DR Congo (Zaire)	ZAR	2006	Executive		65.4%	65.4%	0.00	0.13	0.02	29.7		
Ecuador	ECU	2006	Executive		76.0%	76.0%	0.02	0.56	0.31	34.7		
Egypt	EGY	2005/2005	CP (50%-50%)	94.1%	23.0%	58.5%	0.00	-0.15	0.02	26.4	National Democratic Party	
El Salvador	SLV	2004	Executive		66.2%	66.2%	0.00	0.16	0.03	30.0		
Equatorial Guinea	GNQ	2002	Executive		98.0%	98.0%	0.13	1.44	2.07	45.0		
Eritrea	ERI	1993	Executive		0.0%	0.0%	0.39	-2.50	6.24	-1.1		
Estonia	EST	2003	Parliamentary	58.2%		58.2%	0.00	-0.16	0.03	26.3	Center Party	25.4%
Ethiopia	ETH	2005	Parliamentary	82.6%		82.6%	0.04	0.82	0.67	37.8	Ethiopian People's Rev. Dem. Front	
Fiji	FJI	2006	Parliamentary	88.0%		88.0%	0.07	1.04	1.07	40.3	Fiji United Party	
Finland	FIN	2003/2006	CP (50%-50%)	66.7%	74.1%	70.4%	0.01	0.33	0.11	32.0	Center Party of Finland	24.7%
France	FRA	2002/2002	CP (50%-50%)	60.3%	79.7%	70.0%	0.01	0.31	0.10	31.8	Union for the Presidential Majority	47.3%
Gambia, The	GMB	2002/2006	CP (50%-50%)	56.4%	58.6%	57.5%	0.00	-0.19	0.04	25.9	Alliance for Patriotic R. and C.	
Georgia	GEO	2004/2004	CP (50%-50%)	63.9%	88.0%	76.0%	0.02	0.55	0.31	34.6	National Movement Democratic Front	67.8%
Germany	DEU	2005	Parliamentary	77.7%		77.7%	0.02	0.62	0.39	35.4	Christian Dem. Union/Chr. Soci. Union	35.2%
Ghana	GHA	2004/2004	CP (50%-50%)	85.1%	85.6%	85.4%	0.05	0.93	0.87	39.1	New Patriotic Party	
Greece	GRC	2005	Parliamentary	76.5%		76.5%	0.02	0.57	0.33	34.9	New Democracy	45.4%
Guatemala	GTM	2003	Executive		46.8%	46.8%	0.02	-0.62	0.38	20.9		
Guinea	GIN	2002/2003	CP (50%-50%)	71.6%	82.8%	77.2%	0.02	0.60	0.36	35.2	Party of Unity and Progress	61.6%
Guinea-Bissau	GNB	2004/2005	CP (50%-50%)	76.2%	78.6%	77.4%	0.02	0.61	0.37	35.3	Afr. P. for the Ind. of Guinea/Cape Verde	33.9%
Guyana	GUY	2006	Parliamentary	68.8%		68.8%	0.00	0.27	0.07	31.3	People's Progressive Party-Civic	54.6%
Haiti	HTI	2006	Executive		59.3%	59.3%	0.00	-0.12	0.01	26.8		

Country	Code	Year	SP %	LPS	TS	SS%	MPC %	Executive	ELP %	EC %	TC %	C=x	(x - μ)^2	z	(z - μ_con)^2	x_V_C	Source
China	CHN	2003	0.0%				0.0%				0.0%	0.0%	0.16	-1.90	3.60	5.90	c/e
Colombia	COL	2006						URIBE	62.4%	37.7%	37.7%	37.7%	0.00	-0.13	0.02	26.67	a
Comoros	COM	2006						SAMBI	58.0%	42.0%	42.0%	42.0%	0.00	0.08	0.01	29.06	a
Congo (Brazzaville)	COG	2002						SASSOU-N.	89.4%	10.6%	10.6%	10.6%	0.09	-1.40	1.96	11.74	a
Costa Rica	CRI	2006						ARIAS SANCHEZ	40.9%	59.1%	59.1%	59.1%	0.04	0.88	0.78	38.49	a
Cote D'Ivoire	CIV	2000						GBAGBO	59.4%	40.6%	40.6%	40.6%	0.00	0.01	0.00	28.30	d/e
Croatia	HRV	2003/2005	66.1%	66	152	56.6%	61.3%	MESIC	65.9%	34.1%	47.7%	47.7%	0.01	0.35	0.12	32.22	a
Cuba	CUB	2003	0.0%				0.0%				0.0%	0.0%	0.16	-1.90	3.60	5.90	c/e
Cyprus	CYP	2006	68.8%	18	56	67.9%	68.3%				68.3%	68.3%	0.08	1.32	1.73	43.61	a
Czech Republic	CZE	2006	64.6%	81	200	59.5%	62.1%				62.1%	62.1%	0.05	1.02	1.04	40.14	a
Denmark	DNK	2005	71.0%	52	179	70.9%	71.0%				71.0%	70.0%	0.09	1.39	1.94	44.52	a
Djibouti	DJI	2003	37.3%	65	65	0.0%	18.6%				18.6%	18.6%	0.05	-1.02	1.04	16.18	a
Dominican Republic	DOM	2004						FERNANDEZ R.	57.1%	42.9%	42.9%	42.9%	0.00	0.12	0.01	29.56	a
DR Congo (Zaire)	ZAR	2006						KABILA	58.1%	42.0%	42.0%	42.0%	0.00	0.08	0.01	29.04	d/e
Ecuador	ECU	2006						CORREA	56.7%	43.3%	43.3%	43.3%	0.00	0.14	0.02	29.80	a
Egypt	EGY	2005/2005		311	444	30.0%	30.0%	MUBARAK	88.6%	11.4%	20.7%	20.7%	0.04	-0.93	0.86	17.31	e/g/a
El Salvador	SLV	2004						SACA	57.7%	42.3%	42.3%	42.3%	0.00	0.09	0.01	29.22	a
Equatorial Guinea	GNQ	2002						NGUEMA M.	97.1%	2.9%	2.9%	2.9%	0.14	-1.76	3.10	7.50	d/e
Eritrea	ERI	1993						ISAIAS	100.0%	0.0%	0.0%	0.0%	0.16	-1.90	3.60	5.90	c/e
Estonia	EST	2003	74.6%	28	101	72.3%	73.4%				73.4%	70.0%	0.09	1.39	1.94	44.52	a
Ethiopia	ETH	2005		327	547	40.2%	40.2%				40.2%	40.2%	0.00	-0.01	0.00	28.09	d/f
Fiji	FJI	2006		36	71	49.3%	49.3%				49.3%	49.3%	0.01	0.42	0.18	33.10	g/h
Finland	FIN	2003/2006	75.3%	55	200	72.5%	73.9%	HALONEN	51.8%	48.2%	61.1%	61.1%	0.04	0.97	0.95	39.59	a
France	FRA	2002/2002	52.7%	309	577	46.4%	49.6%	CHIRAC	82.2%	17.8%	33.7%	33.7%	0.00	-0.31	0.10	24.49	a
Gambia, The	GMB	2002/2006		45	48	6.3%	6.3%	JAMMEH	67.3%	32.7%	19.5%	19.5%	0.04	-0.98	0.96	16.63	a/d/e
Georgia	GEO	2004/2004	32.3%	135	235	42.6%	37.4%	SAAKASHVILI	96.9%	3.1%	20.2%	20.2%	0.04	-0.95	0.89	17.06	a
Germany	DEU	2005	64.8%	226	603	62.5%	63.7%				63.7%	63.7%	0.05	1.10	1.20	41.03	a
Ghana	GHA	2004/2004		128	230	44.3%	44.3%	KUFUOR	52.5%	47.6%	45.9%	45.9%	0.00	0.26	0.07	31.25	a/d/e/i
Greece	GRC	2005	54.6%	165	300	45.0%	49.8%				49.8%	49.8%	0.01	0.44	0.20	33.38	a
Guatemala	GTM	2003						BERGER	54.1%	45.9%	45.9%	45.9%	0.00	0.26	0.07	31.21	a
Guinea	GIN	2002/2003	38.4%	85	114	25.4%	31.9%	CONTE	95.3%	4.8%	18.3%	18.3%	0.05	-1.03	1.07	16.02	a/d/e
Guinea-Bissau	GNB	2004/2005	66.1%	45	100	55.0%	60.6%	VIEIRA	52.4%	47.7%	54.1%	54.1%	0.02	0.65	0.42	35.75	d/e
Guyana	GUY	2006	45.4%	36	65	44.6%	45.0%				45.0%	45.0%	0.00	0.22	0.05	30.73	a/e/g/f
Haiti	HTI	2006						PREVAL	51.2%	48.8%	48.8%	48.8%	0.01	0.40	0.16	32.82	a

Country	Code	Year	Election Type	Parl.	Exec.	P=x	(x - μ)^2	z	(z - μ_con)^2	x_V_P	Party	LP %
Honduras	HND	2005	Executive		46.0%	46.0%	0.03	-0.65	0.42	20.5		
Hungary	HUN	2006	Parliamentary	67.8%		67.8%	0.00	0.23	0.05	30.8	Hungarian Socialist Party	43.2%
Iceland	ISL	2003	Parliamentary	87.7%		87.7%	0.07	1.02	1.05	40.2	Independence Party	33.7%
India	IND	2004	Parliamentary	57.8%		57.8%	0.00	-0.18	0.03	26.1	India National Congress	26.7%
Indonesia	IDN	2004/2004	CP (50%-50%)	84.1%	75.2%	79.7%	0.03	0.70	0.49	36.4	Federation of Functional Groups	21.6%
Iran	IRN	2004/2005	CP (50%-50%)	67.0%	29.9%	48.4%	0.02	-0.55	0.30	21.7	The United Front of Conservatives	
Iraq	IRQ	2005	Parliamentary	79.8%		79.8%	0.03	0.71	0.50	36.5	Unified Iraqi Coalition	41.2%
Ireland	IRL	2002	Parliamentary	63.0%		63.0%	0.00	0.03	0.00	28.5	The Republican Party	41.5%
Israel	ISR	2006	Parliamentary	63.6%		63.6%	0.00	0.05	0.00	28.8	Kadima	22.0%
Italy	ITA	2006	Parliamentary	83.6%		83.6%	0.05	0.86	0.74	38.3	The Union	49.8%
Jamaica	JAM	2002	Parliamentary	56.8%		56.8%	0.00	-0.22	0.05	25.6	People's National Party	52.4%
Japan	JPN	2005	Parliamentary	67.5%		67.5%	0.00	0.21	0.05	30.7	Liberal Democratic Party	38.2%
Jordan	JOR	2003/1999	CP (50%-50%)	81.8%	0.0%	40.9%	0.05	-0.85	0.73	18.1	Islamic Action Front	10.4%
Kazakhstan	KAZ	2005	Executive		76.8%	76.8%	0.02	0.59	0.34	35.0		
Kenya	KEN	2002	Parliamentary	57.2%		57.2%	0.00	-0.20	0.04	25.8	National Rainbow Coalition	
Kuwait	KWT	2006/2006	CP (50%-50%)	91.9%	0.0%	46.0%	0.03	-0.65	0.43	20.5	Islamic Bloc	
Kyrgyzstan	KGZ	2005	Executive		75.0%	75.0%	0.02	0.51	0.26	34.2		
Laos	LAO	2006	Parliamentary	99.8%		99.8%	0.14	1.51	2.28	45.9	LPRP	
Latvia	LVA	2006	Parliamentary	60.1%		60.1%	0.00	-0.08	0.01	27.2	People's Party	19.6%
Lebanon	LBN	2005	Parliamentary	46.5%		46.5%	0.02	-0.63	0.40	20.8	Current of the Future/Hariri Alliance	
Lesotho	LSO	2002	Parliamentary	66.7%		66.7%	0.00	0.18	0.03	30.3	Lesotho Congress for Democracy	54.9%
Liberia	LBR	2005/2005	CP (50%-50%)	76.5%	62.3%	69.4%	0.01	0.29	0.08	31.6	Congress for Democratic Change	
Libya	LBY	1969	Executive		0.0%	0.0%	0.39	-2.50	6.24	-1.1		
Lithuania	LTU	2004	Parliamentary	45.9%		45.9%	0.03	-0.65	0.43	20.5	Labour Party	28.6%
Luxembourg	LUX	2004	Parliamentary	91.7%		91.7%	0.09	1.19	1.40	42.1	Christian Social People's Party	36.1%
Macedonia	MKD	2006/2004	CP (50%-50%)	56.0%	55.2%	55.6%	0.00	-0.27	0.07	25.0	Dem.P. for Macedonian National Unity	32.5%
Madagascar	MDG	2006	Executive		61.9%	61.9%	0.00	-0.01	0.00	28.0		
Malawi	MWI	2004	Executive		54.3%	54.3%	0.01	-0.32	0.10	24.5		
Malaysia	MYS	2004	Parliamentary	73.9%		73.9%	0.01	0.47	0.22	33.7	National Front/ Barisan Nasional	62.4%
Maldives	MDV	2003	Executive		77.5%	77.5%	0.02	0.61	0.38	35.4		
Mali	MLI	2002	Executive		38.3%	38.3%	0.06	-0.96	0.92	16.9		
Malta	MLT	2003	Parliamentary	97.0%		97.0%	0.12	1.40	1.95	44.5	Nationalist Party	51.8%
Mauritania	MRT	2006/2003	CP (50%-50%)	69.5%	61.7%	65.6%	0.00	0.14	0.02	29.8	Rally of Democratic Forces	
Mauritius	MUS	2005	Parliamentary	81.5%		81.5%	0.04	0.78	0.60	37.3	Social Alliance	

Country	Code	Year	SP %	LPS	TS	SS%	MPC %	Executive	ELP %	EC %	TC %	C=x	(x - μ)^2	z	(z - μ_con)^2	x_V_C	Source
Honduras	HND	2005						ZELAYA	49.8%	50.2%	50.2%	50.2%	0.01	0.46	0.21	33.60	e/g
Hungary	HUN	2006	56.8%	190	386	50.8%	53.8%				53.8%	53.8%	0.02	0.63	0.40	35.58	b
Iceland	ISL	2003	66.3%	22	63	65.1%	65.7%				65.7%	65.7%	0.06	1.19	1.42	42.15	a
India	IND	2004	73.3%	145	543	73.3%	73.3%				73.3%	70.0%	0.09	1.39	1.94	44.52	a
Indonesia	IDN	2004/2004	78.4%	128	550	76.7%	77.6%	YUDHOYONO/K.	60.6%	39.4%	58.5%	58.5%	0.03	0.85	0.73	38.16	a
Iran	IRN	2004/2005		156	290	46.2%	46.2%	AHMADINEJAD	80.8%	19.2%	32.7%	32.7%	0.01	-0.36	0.13	23.93	n/a/e
Iraq	IRQ	2005	58.8%	128	275	53.5%	56.1%				56.1%	56.1%	0.02	0.74	0.55	36.87	a
Ireland	IRL	2002	58.5%	81	166	51.2%	54.9%				54.9%	54.9%	0.02	0.68	0.46	36.16	b
Israel	ISR	2006	78.0%	29	120	75.8%	76.9%				76.9%	70.0%	0.09	1.39	1.94	44.52	a
Italy	ITA	2006	50.2%	348	630	44.8%	47.5%				47.5%	47.5%	0.01	0.33	0.11	32.09	a
Jamaica	JAM	2002	47.6%	35	60	41.7%	44.6%				44.6%	44.6%	0.00	0.20	0.04	30.52	a
Japan	JPN	2005	61.8%	296	480	38.3%	50.1%				50.1%	50.1%	0.01	0.46	0.21	33.52	a/f/g
Jordan	JOR	2003/1999	89.6%	17	110	84.5%	87.1%	ABDALLAH II	100.0%	0.0%	43.5%	43.5%	0.00	0.15	0.02	29.92	c/a/e/g
Kazakhstan	KAZ	2005						NAZARBAYEV	91.2%	8.9%	8.9%	8.9%	0.10	-1.48	2.19	10.78	a
Kenya	KEN	2002		132	224	41.1%	41.1%				41.1%	41.1%	0.00	0.03	0.00	28.56	d/f
Kuwait	KWT	2006/2006		17	50	66.0%	66.0%	SABAH	100.0%	0.0%	33.0%	33.0%	0.01	-0.35	0.12	24.11	c/a
Kyrgyzstan	KGZ	2005						BAKIEV	88.7%	11.3%	11.3%	11.3%	0.08	-1.37	1.87	12.12	a
Laos	LAO	2006		113	115	1.7%	1.7%				1.7%	1.7%	0.15	-1.82	3.30	6.86	e/f
Latvia	LVA	2006	80.4%	23	100	77.0%	78.7%				78.7%	70.0%	0.09	1.39	1.94	44.52	a
Lebanon	LBN	2005		72	128	43.8%	43.8%				43.8%	43.8%	0.00	0.16	0.03	30.04	g/f
Lesotho	LSO	2002	45.1%	77	120	35.8%	40.5%				40.5%	40.5%	0.00	0.01	0.00	28.23	d
Liberia	LBR	2005/2005		15	65	76.9%	76.9%	JOHNSON S.	59.4%	40.6%	58.8%	58.8%	0.03	0.87	0.75	38.32	a/d/e
Libya	LBY	1969						al-QADHAFI	100.0%	0.0%	0.0%	0.0%	0.16	-1.90	3.60	5.90	c/e
Lithuania	LTU	2004	71.4%	39	141	72.3%	71.9%				71.9%	70.0%	0.09	1.39	1.94	44.52	b
Luxembourg	LUX	2004	63.9%	24	60	60.0%	62.0%				62.0%	62.0%	0.05	1.02	1.03	40.08	b
Macedonia	MKD	2006/2004	67.5%	45	120	62.5%	65.0%	CRVENKOVSKI	42.5%	57.5%	61.3%	61.3%	0.04	0.98	0.97	39.70	a
Madagascar	MDG	2006						RAVALOMANANA	54.8%	45.2%	45.2%	45.2%	0.00	0.23	0.05	30.84	d/e
Malawi	MWI	2004						MUTHARIKA	35.9%	64.1%	64.1%	64.1%	0.06	1.12	1.25	41.26	d
Malaysia	MYS	2004	37.6%	199	219	9.1%	23.4%				23.4%	23.4%	0.03	-0.80	0.64	18.80	a/f
Maldives	MDV	2003						GAYOOM	90.3%	9.7%	9.7%	9.7%	0.09	-1.44	2.07	11.26	a/e
Mali	MLI	2002						TOURÉ	64.4%	35.6%	35.6%	35.6%	0.00	-0.22	0.05	25.54	a
Malta	MLT	2003	48.2%	35	65	46.2%	47.2%				47.2%	47.2%	0.00	0.32	0.10	31.93	a
Mauritania	MRT	2006/2003		15	95	84.2%	84.2%	TAYA	67.4%	32.6%	58.4%	58.4%	0.03	0.85	0.72	38.13	d/f
Mauritius	MUS	2005		42	70	40.0%	40.0%				40.0%	40.0%	0.00	-0.02	0.00	27.97	d

Country	Code	Year	Election Type	Parl.	Exec.	P=x	(x - μ)^2	z	(z - μ_con)^2	x_V_P	Party	LP %
Mexico	MEX	2006	Executive		58.6%	58.6%	0.00	-0.14	0.02	26.5		
Moldova	MDA	2005/2005	CP (50%-50%)	64.8%	75.3%	70.0%	0.01	0.32	0.10	31.9	Communist P. of the R. of Moldova	46.0%
Mongolia	MNG	2004	Parliamentary	81.8%		81.8%	0.04	0.79	0.62	37.4	Mongolian People's Revolutionary Party	48.8%
Montenegro	MNP	2006/2003	CP (50%-50%)	71.1%	48.4%	59.7%	0.00	-0.10	0.01	27.0	Social Democratic Party of Montenegro	48.9%
Morocco	MAR	2002/1999	CP (50%-50%)	51.6%	0.0%	25.8%	0.13	-1.46	2.14	11.0	Socialist Union of Popular Forces	15.4%
Mozambique	MOZ	2004/2004	CP (50%-50%)	36.3%	36.4%	36.4%	0.07	-1.04	1.08	16.0	Mozambique Liberation Front	62.0%
Namibia	NAM	2004/2004	CP (50%-50%)	84.5%	84.9%	84.7%	0.05	0.90	0.82	38.8	South West Africa People's Organization	76.3%
Nepal	NPL	1999	Parliamentary	65.8%		65.8%	0.00	0.14	0.02	29.9	Nepali Congress (NCP)	37.2%
Netherlands	NLD	2006	Parliamentary	80.4%		80.4%	0.03	0.73	0.53	36.7	Christian Democratic Appeal	26.5%
New Zealand	NZL	2005	Parliamentary	81.0%		81.0%	0.04	0.76	0.57	37.0	Labour Party	41.1%
Nicaragua	NIC	2006	Executive		66.8%	66.8%	0.00	0.19	0.03	30.4		
Niger	NER	2004	Executive		45.0%	45.0%	0.03	-0.69	0.48	20.1		
Nigeria	NGA	2003	Executive		69.1%	69.1%	0.00	0.28	0.08	31.4		
North Korea	PRK	1994	Executive		0.0%	0.0%	0.39	-2.50	6.24	-1.1		
Norway	NOR	2005	Parliamentary	77.4%		77.4%	0.02	0.61	0.38	35.4	Labour Party	32.7%
Oman	OMN	1970	Executive		0.0%	0.0%	0.39	-2.50	6.24	-1.1		
Pakistan	PAK	1999	Executive		0.0%	0.0%	0.39	-2.50	6.24	-1.1		
Panama	PAN	2004	Executive		76.9%	76.9%	0.02	0.59	0.35	35.1		
Papa New Guinea	PNG	2002	Parliamentary	75.0%		75.0%	0.02	0.51	0.26	34.2	National Alliance Party	
Paraguay	PRY	2003	Executive		64.2%	64.2%	0.00	0.08	0.01	29.1		
Peru	PER	2006	Executive		87.7%	87.7%	0.07	1.03	1.05	40.2		
Philippines	PHL	2004	Executive		84.1%	84.1%	0.05	0.88	0.77	38.5		
Poland	POL	2005/2005	CP (50%-50%)	40.6%	51.0%	45.8%	0.03	-0.66	0.43	20.4	Law and Justice	27.0%
Portugal	PRT	2005/2006	CP (50%-50%)	65.0%	61.5%	63.3%	0.00	0.04	0.00	28.7	Socialist Party	46.4%
Qatar	QAT	1995	Executive		0.0%	0.0%	0.39	-2.50	6.24	-1.1		
Romania	ROM	2004/2004	CP (50%-50%)	58.5%	54.8%	56.7%	0.00	-0.22	0.05	25.6	Social Dem. P./Humanist P. of Romania	36.6%
Russia	RUS	2003/2004	CP (50%-50%)	55.7%	64.4%	60.0%	0.00	-0.09	0.01	27.1	United Russia	38.2%
Rwanda	RWA	2003	Executive		96.6%	96.6%	0.12	1.38	1.90	44.4		
Saudi Arabia	SAU	2005	Executive		0.0%	0.0%	0.39	-2.50	6.24	-1.1		
Senegal	SEN	2000	Executive		60.8%	60.8%	0.00	-0.06	0.00	27.5		
Serbia	YUG	2003/2004	CP (50%-50%)	58.8%	48.4%	53.6%	0.01	-0.35	0.12	24.1	Serbian Radical Party	28.0%
Sierra Leone	SLE	2002/2002	CP (50%-50%)	83.3%	81.4%	82.4%	0.04	0.81	0.66	37.7	Sierra Leone People's Party	69.9%
Singapore	SGP	2006	Parliamentary	94.0%		94.0%	0.10	1.28	1.63	43.2	People's Action Party	66.7%
Slovakia	SVK	2006/2004	CP (50%-50%)	54.7%	43.5%	49.1%	0.02	-0.53	0.28	22.0	Direction	29.1%

Country	Code	Year	SP %	LPS	TS	SS%	MPC %	Executive	ELP %	EC %	TC %	C=x	(x - μ)^2	z	(z - μ_con)^2	x_V_C	Source
Mexico	MEX	2006						CALDERON	35.9%	64.1%	64.1%	64.1%	0.06	1.12	1.25	41.27	e/f
Moldova	MDA	2005/2005	54.0%	56	101	44.6%	49.3%	VORONIN	98.7%	1.3%	25.3%	25.3%	0.02	-0.71	0.50	19.86	a
Mongolia	MNG	2004	51.2%	37	76	51.3%	51.3%				51.3%	51.3%	0.01	0.51	0.26	34.18	a/e/f
Montenegro	MNP	2006/2003	51.1%	41	81	49.4%	50.2%	VUJANOVIC	64.3%	35.8%	43.0%	43.0%	0.00	0.12	0.02	29.62	a/e
Morocco	MAR	2002/1999	84.6%	50	325	84.6%	84.6%	MOHAMED VI	100.0%	0.0%	42.3%	42.3%	0.00	0.09	0.01	29.24	c/e
Mozambique	MOZ	2004/2004	38.0%	160	250	36.0%	37.0%	GUEBUZA	63.7%	36.3%	36.6%	36.6%	0.00	-0.18	0.03	26.10	d/e
Namibia	NAM	2004/2004	23.7%	55	72	23.6%	23.6%	POHAMBA	76.3%	23.7%	23.7%	23.7%	0.03	-0.78	0.62	18.96	d/e
Nepal	NPL	1999	62.8%	111	205	45.9%	54.3%				54.3%	54.3%	0.02	0.66	0.43	35.88	a
Netherlands	NLD	2006	73.5%	41	150	72.7%	73.1%				73.1%	70.0%	0.09	1.39	1.94	44.52	a
New Zealand	NZL	2005	58.9%	50	120	58.3%	58.6%				58.6%	58.6%	0.03	0.86	0.74	38.24	a
Nicaragua	NIC	2006						ORTEGA	38.0%	62.0%	62.0%	62.0%	0.05	1.02	1.04	40.11	a
Niger	NER	2004						TANDJA	65.5%	34.5%	34.5%	34.5%	0.00	-0.28	0.08	24.92	a
Nigeria	NGA	2003						OBASANJO	61.9%	38.1%	38.1%	38.1%	0.00	-0.11	0.01	26.90	a
North Korea	PRK	1994						KIM Jong Il	100.0%	0.0%	0.0%	0.0%	0.16	-1.90	3.60	5.90	c/e/f/j
Norway	NOR	2005	67.3%	61	169	63.9%	65.6%				65.6%	65.6%	0.06	1.19	1.41	42.10	a
Oman	OMN	1970						QABOOS	100.0%	0.0%	0.0%	0.0%	0.16	-1.90	3.60	5.90	c/e
Pakistan	PAK	1999						MUSHARRAF	100.0%	0.0%	0.0%	0.0%	0.16	-1.90	3.60	5.90	c/e
Panama	PAN	2004						TORRIJOS	47.5%	52.5%	52.5%	52.5%	0.01	0.57	0.33	34.89	a
Papa New Guinea	PNG	2002		19	109	82.6%	82.6%				82.6%	70.0%	0.09	1.39	1.94	44.52	g/k
Paraguay	PRY	2003						DUARTE FRUTOS	37.1%	62.9%	62.9%	62.9%	0.05	1.06	1.12	40.58	a
Peru	PER	2006						GARCIA	52.6%	47.4%	47.4%	47.4%	0.00	0.33	0.11	32.03	a
Philippines	PHL	2004						MACAPAGAL-A.	40.0%	60.0%	60.0%	60.0%	0.04	0.92	0.85	39.01	a
Poland	POL	2005/2005	73.0%	155	460	66.3%	69.7%	KACZYNSKI	54.0%	46.0%	57.8%	57.8%	0.03	0.82	0.67	37.79	a
Portugal	PRT	2005/2006	53.6%	120	230	47.8%	50.7%	SILVA	50.5%	49.5%	50.1%	50.1%	0.01	0.46	0.21	33.53	a
Qatar	QAT	1995						HAMAD	100.0%	0.0%	0.0%	0.0%	0.16	-1.90	3.60	5.90	c/e
Romania	ROM	2004/2004	63.4%	132	345	61.7%	62.6%	BASESCU	51.2%	48.8%	55.7%	55.7%	0.02	0.72	0.52	36.61	a
Russia	RUS	2003/2004	61.8%	221	450	50.9%	56.4%	PUTIN	71.9%	28.1%	42.2%	42.2%	0.00	0.09	0.01	29.19	a
Rwanda	RWA	2003						KAGAME	95.1%	5.0%	5.0%	5.0%	0.13	-1.66	2.77	8.63	a
Saudi Arabia	SAU	2005						AL-AZIZ AL SAUD	100.0%	0.0%	0.0%	0.0%	0.16	-1.90	3.60	5.90	c/e
Senegal	SEN	2000						WADE	58.5%	41.5%	41.5%	41.5%	0.00	0.05	0.00	28.80	d/e
Serbia	YUG	2003/2004	72.0%	82	250	67.2%	69.6%	TADIC	54.0%	46.0%	57.8%	57.8%	0.03	0.82	0.67	37.80	a
Sierra Leone	SLE	2002/2002	30.1%	83	112	25.9%	28.0%	KABBAH	70.0%	30.0%	29.0%	29.0%	0.01	-0.53	0.29	21.89	d
Singapore	SGP	2006	33.3%	45	84	46.4%	39.9%				39.9%	39.9%	0.00	-0.02	0.00	27.89	g/f
Slovakia	SVK	2006/2004	70.9%	50	150	66.7%	68.8%	GAŠPAROVIC	59.9%	40.1%	54.4%	54.4%	0.02	0.66	0.44	35.93	a

Country	Code	Year	Election Type	Parl.	Exec.	P=x	(x - μ)^2	z	(z - μ_con)^2	x_V_P	Party	LP %
Slovenia	SVN	2004/2002	CP (50%-50%)	60.7%	65.1%	62.9%	0.00	0.03	0.00	28.5	Social Democrats	29.1%
Solomon Islands	SLB	2006	Parliamentary	57.0%		57.0%	0.00	-0.21	0.04	25.7	Rural Advancement Party	6.3%
Somalia	SOM	2004	Executive		0.0%	0.0%	0.39	-2.50	6.24	-1.1		
South Africa	ZAF	2004	Parliamentary	76.7%		76.7%	0.02	0.58	0.34	35.0	African National Congress	69.7%
South Korea	KOR	2004/2002	CP (50%-50%)	60.0%	70.8%	65.4%	0.00	0.13	0.02	29.7	The Uri Party	38.3%
Spain	ESP	2004	Parliamentary	77.2%		77.2%	0.02	0.60	0.36	35.2	Spanish Socialist Workers' Party	43.3%
Sri Lanka	LKA	2004/2005	CP (50%-50%)	76.0%	73.7%	74.9%	0.02	0.51	0.26	34.1	United People's Freedom Alliance	45.6%
Sweden	SWE	2006	Parliamentary	82.0%		82.0%	0.04	0.80	0.63	37.5	Social Democrats	35.0%
Switzerland	CHE	2003	Parliamentary	45.4%		45.4%	0.03	-0.67	0.45	20.3	Swiss People's Party	26.6%
Syria	SYR	2000	Executive		74.6%	74.6%	0.02	0.50	0.25	34.0		
Taiwan	TWN	2004/2004	CP (50%-50%)	53.2%	80.3%	66.7%	0.00	0.18	0.03	30.3	Minjindang (Dem. Progressive P.)	38.0%
Tajikistan	TJK	2005/2006	CP (50%-50%)	93.2%	91.0%	92.1%	0.09	1.20	1.44	42.3	People's Democratic Party of Tajikistan	64.5%
Tanzania	TZA	2005/2005	CP (50%-50%)	66.0%	72.4%	69.2%	0.00	0.28	0.08	31.5	Chama Cha Mapinduzi	70.0%
Thailand	THA	2005/1946	CP (75%-25%)	72.3%	0.0%	54.2%	0.01	-0.32	0.10	24.4	Thai Rak Thai	56.4%
Togo	TGO	2002/2005	CP (50%-50%)	67.4%	63.6%	65.5%	0.00	0.13	0.02	29.7	Rally of the Togolese People	
Trinidad and Tobago	TTO	2002	Parliamentary	69.6%		69.6%	0.01	0.30	0.09	31.6	People's National Movement	50.7%
Tunisia	TUN	2004/2004	CP (50%-50%)	86.4%	91.5%	89.0%	0.07	1.08	1.16	40.8	Constitutional Dem. Rally Party	87.6%
Turkey	TUR	2002/2000	CP (75%-25%)	79.4%	0.0%	59.6%	0.00	-0.11	0.01	26.9	Justice and Developement Party	34.3%
Turkmenistan	TKM	1999	Executive		0.0%	0.0%	0.39	-2.50	6.24	-1.1		
Uganda	UGA	2006	Executive		69.2%	69.2%	0.00	0.28	0.08	31.5		
Ukraine	UKR	2006/2004	CP (50%-50%)	67.7%	77.3%	72.5%	0.01	0.41	0.17	33.0	Party of Regions	32.1%
United Arab Emirates	ARE	2004	Executive		0.0%	0.0%	0.39	-2.50	6.24	-1.1		
United Kingdom	GBR	2005	Parliamentary	61.3%		61.3%	0.00	-0.04	0.00	27.7	Labour Party	35.2%
United States of America	USA	2004	Executive		58.1%	58.1%	0.00	-0.16	0.03	26.2		
Uruguay	URY	2004	Executive		88.3%	88.3%	0.07	1.05	1.10	40.5		
Uzbekistan	UZB	2000	Executive		95.1%	95.1%	0.11	1.32	1.75	43.7		
Venezuela	VEN	2006	Executive		74.1%	74.1%	0.01	0.48	0.23	33.8		
Vietnam	VNM	2002	Parliamentary	98.9%		98.9%	0.13	1.47	2.17	45.5	Vietnam Fatherland Front	100.0%
Yemen	YEM	2003/2006	CP (50%-50%)	76.0%	65.2%	70.6%	0.01	0.34	0.11	32.1	General People's Congress	58.0%
Zambia	ZMB	2006/2006	CP (50%-50%)	70.6%	70.8%	70.7%	0.01	0.34	0.12	32.2	Movement for Multiparty Democracy	
Zimbabwe	ZWE	2005/2002	CP (50%-50%)	47.7%	56.0%	51.8%	0.01	-0.42	0.17	23.3	African National Union-Patriotic Front	59.6%

						0.62	10.35	0.00	167.00			
Z-Transformation variables:						**μ**	**∑**	**μ_con**	**∑_con**			
						0.25		1.00				
						σ		**σ_con**				

Country	Code	Year	SP %	LPS	TS	SS%	MPC %	Executive	ELP %	EC %	TC %	C=x	(x - μ)^2	z	(z - μ_con)^2	x_V_C	Source
Slovenia	SVN	2004/2002	70.9%	29	90	67.8%	69.3%	DRNOVŠEK	56.5%	43.5%	56.4%	56.4%	0.03	0.75	0.57	37.02	a
Solomon Islands	SLB	2006	93.7%	4	50	92.0%	92.9%				92.9%	70.0%	0.09	1.39	1.94	44.52	g
Somalia	SOM	2004						YUSUF	100.0%	0.0%	0.0%	0.0%	0.16	-1.90	3.60	5.90	c/d/e
South Africa	ZAF	2004	30.3%	279	400	30.3%	30.3%				30.3%	30.3%	0.01	-0.47	0.22	22.60	d
South Korea	KOR	2004/2002	61.7%	152	299	49.2%	55.4%	ROH Moo-hyun	48.9%	51.1%	53.3%	53.3%	0.02	0.61	0.37	35.29	a
Spain	ESP	2004	56.7%	164	350	53.1%	54.9%				54.9%	54.9%	0.02	0.68	0.47	36.19	a
Sri Lanka	LKA	2004/2005	54.4%	105	225	53.3%	53.9%	RAJAPAKSHA	50.3%	49.7%	51.8%	51.8%	0.01	0.54	0.29	34.47	a
Sweden	SWE	2006	65.0%	130	349	62.8%	63.9%				63.9%	63.9%	0.06	1.11	1.22	41.14	a
Switzerland	CHE	2003	73.4%	55	200	72.5%	73.0%				73.0%	70.0%	0.09	1.39	1.94	44.52	a
Syria	SYR	2000						al-ASAD	97.3%	2.7%	97.3%	70.0%	0.09	1.39	1.94	44.52	c/e/a
Taiwan	TWN	2004/2004	62.0%	89	225	60.4%	61.2%	CHEN	50.1%	49.9%	55.6%	55.6%	0.02	0.71	0.51	36.55	a/g
Tajikistan	TJK	2005/2006	35.5%	52	63	17.5%	26.5%	RAHMON	79.3%	20.7%	23.6%	23.6%	0.03	-0.79	0.62	18.91	a/e/l
Tanzania	TZA	2005/2005	30.0%	275	323	14.9%	22.4%	KIKWETE	80.3%	19.7%	21.1%	21.1%	0.04	-0.91	0.82	17.53	d/e
Thailand	THA	2005/1946	43.6%	377	500	24.6%	34.1%	PHUMIPHON	100.0%	0.0%	25.6%	25.6%	0.02	-0.69	0.48	20.01	c/e/g
Togo	TGO	2002/2005		72	81	11.1%	11.1%	GNASSINGBE	60.2%	39.9%	25.5%	25.5%	0.02	-0.70	0.49	19.96	a/d/e
Trinidad and Tobago	TTO	2002	49.3%	20	36	44.4%	46.9%				46.9%	46.9%	0.00	0.31	0.09	31.75	a
Tunisia	TUN	2004/2004	12.4%	152	189	19.6%	16.0%	BEN ALI	94.5%	5.5%	10.8%	10.8%	0.09	-1.39	1.94	11.83	a
Turkey	TUR	2002/2000	65.7%	363	550	34.0%	49.9%	SEZER	61.9%	38.1%	46.9%	46.9%	0.00	0.31	0.10	31.78	c/a
Turkmenistan	TKM	1999						NIYAZOV	100.0%	0.0%	0.0%	0.0%	0.16	-1.90	3.60	5.90	c/a
Uganda	UGA	2006						MUSEVENI	59.3%	40.7%	40.7%	40.7%	0.00	0.02	0.00	28.38	a
Ukraine	UKR	2006/2004	67.9%	186	450	58.7%	63.3%	YUSHCHENKO	54.0%	46.0%	54.6%	54.6%	0.02	0.67	0.45	36.03	a/b
United Arab Emirates	ARE	2004						KHALIFA	100.0%	0.0%	0.0%	0.0%	0.16	-1.90	3.60	5.90	c/e
United Kingdom	GBR	2005	64.8%	356	645	44.8%	54.8%				54.8%	54.8%	0.02	0.68	0.46	36.13	b
United States of America	USA	2004						BUSH	50.7%	49.3%	49.3%	49.3%	0.01	0.42	0.18	33.10	m
Uruguay	URY	2004						VAZQUEZ	51.9%	48.1%	48.1%	48.1%	0.01	0.36	0.13	32.41	a
Uzbekistan	UZB	2000						KARIMOV	91.9%	8.1%	8.1%	8.1%	0.10	-1.52	2.30	10.37	c
Venezuela	VEN	2006						CHAVEZ	62.9%	37.2%	37.2%	37.2%	0.00	-0.15	0.02	26.39	a
Vietnam	VNM	2002	0.0%	500	500	0.0%	0.0%				0.0%	0.0%	0.16	-1.90	3.60	5.90	c/e
Yemen	YEM	2003/2006	42.0%	238	301	20.9%	31.5%	SALEH	77.2%	22.8%	27.1%	27.1%	0.02	-0.62	0.39	20.87	a
Zambia	ZMB	2006/2006		74	150	50.7%	50.7%	MWANAWASA	43.0%	57.0%	53.8%	53.8%	0.02	0.63	0.40	35.61	d/e/f
Zimbabwe	ZWE	2005/2002	40.4%	78	120	35.0%	37.7%	MUGABE	56.0%	44.0%	40.9%	40.9%	0.00	0.02	0.00	28.44	a

	0.40	7.56	0.00	167.00
	μ	∑	μ_con	∑_con
	0.21		1.00	
	σ		σ_con	

Z-Transformation variables:

(Source: Own illustration)

H. Correlation Data for GDP PPP 2006

Key:

GDP PPP=x ....gross domestic product based on purchasing-power-parity per capita[230]

z ....z-transformed "GDP PPP=x"-values[231]

x_GDP_PPP ......re-transformed z-values[232]

μ_con ....control mean value[238]

σ_con ....control standard deviation[233]

Cuba ....missing values

Explanation:

The mean value and the standard deviation ($\mu=28.16$; $\sigma=11.74$) of the FH scale is used for the re-transformation calculations.[234]

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[230] See IMF 2008
[231] See Tab. 3: Formulas for Z-Transformation, 84
[232] See Tab. 4: Re-Transformation of z-values, 84
[233] The z-transformation transforms a random distribution into a distribution with a mean value of zero and a standard deviation of one (Bortz 1999, 756).
[234] See Appendix F. Freedom House – Operationalization for 2006, 121

Country	Code	GDP PPP=x	(x - μ)^2	z	(z - μ_con)^2	x_GDP_PPP
Afghanistan	AFG	658	140197699.7	-0.82	0.67	18.58
Albania	ALB	5,815	44662795.84	-0.46	0.21	22.76
Algeria	DZA	6,195	39725073	-0.43	0.19	23.06
Angola	AGO	4,630	61910285.84	-0.54	0.29	21.80
Argentina	ARG	12,054	197294.0575	-0.03	0.00	27.80
Armenia	ARM	4,328	66746333.94	-0.56	0.32	21.55
Australia	AUS	34,386	479095227.3	1.51	2.28	45.87
Austria	AUT	36,133	558623059.2	1.63	2.65	47.28
Azerbaijan	AZE	6,061	41441727.57	-0.44	0.20	22.95
Bahamas	BHS	23,930	130681753.9	0.79	0.62	37.41
Bahrain	BHR	29,892	302543479.8	1.20	1.44	42.23
Bangladesh	BGD	1,223	127128533	-0.78	0.60	19.04
Barbados	BRB	17,555	25572581.91	0.35	0.12	32.25
Belarus	BLR	9,759	7503627.29	-0.19	0.04	25.95
Belgium	BEL	33,742	451300527.3	1.46	2.14	45.35
Belize	BLZ	7,667	23339169.3	-0.33	0.11	24.25
Benin	BEN	1,486	121259826.4	-0.76	0.58	19.25
Bhutan	BTN	4,057	71253215.19	-0.58	0.34	21.33
Bolivia	BOL	3,882	74245725.89	-0.59	0.35	21.19
Bosnia-Herzegovina	BIH	6,501	35966251.4	-0.41	0.17	23.31
Botswana	BWA	15,089	6713390.045	0.18	0.03	30.26
Brazil	BRA	9,086	11640542.71	-0.24	0.06	25.40
Brunei	BRN	50,147	1417449087	2.60	6.73	58.62
Bulgaria	BGR	10,300	4829792.798	-0.15	0.02	26.38
Burkina Faso	BFA	1,160	128543372.3	-0.78	0.61	18.99
Burma (Myanmar)	MMR	980	132671464.3	-0.79	0.63	18.84
Burundi	BDI	356	147419712.2	-0.84	0.70	18.34
Cambodia	KHM	1,626	118200557	-0.75	0.56	19.37
Cameroon	CMR	2,025	109689153.2	-0.72	0.52	19.69
Canada	CAN	37,001	600400343.5	1.69	2.85	47.98
Cape Verde	CPV	3,035	89559705.22	-0.65	0.43	20.51
Central African Republic	CAF	692	139374764	-0.81	0.66	18.61
Chad	TCD	1,663	117409771.3	-0.75	0.56	19.40
Chile	CHL	13,032	284999.0715	0.04	0.00	28.59
China	CHN	4,657	61479100.55	-0.54	0.29	21.82
Colombia	COL	7,317	26840760.73	-0.36	0.13	23.97
Comoros	COM	1,131	129216349.5	-0.78	0.61	18.97
Congo (Brazzaville)	COG	3,800	75651724.09	-0.60	0.36	21.13
Costa Rica	CRI	9,590	8454806.271	-0.20	0.04	25.81
Cote D'Ivoire	CIV	1,690	116819629	-0.74	0.56	19.42
Croatia	HRV	14,318	3311970.65	0.13	0.02	29.63
Cuba	CUB					
Cyprus	CYP	25,844	178113715.3	0.92	0.85	38.96
Czech Republic	CZE	22,258	95262871.31	0.67	0.45	36.06
Denmark	DNK	35,856	545610741.5	1.61	2.59	47.06
Djibouti	DJI	2,156	106964637	-0.71	0.51	19.80
Dominican Republic	DOM	7,391	26080590.59	-0.35	0.12	24.03
DR Congo (Zaire)	ZAR	294	148939055	-0.84	0.71	18.29
Ecuador	ECU	6,978	30473810.98	-0.38	0.14	23.70
Egypt	EGY	5,097	54780055.2	-0.51	0.26	22.17
El Salvador	SLV	5,533	48513662.18	-0.48	0.23	22.53
Equatorial Guinea	GNQ	13,461	926521.8363	0.07	0.00	28.94
Eritrea	ERI	742	138209083.9	-0.81	0.66	18.65
Estonia	EST	18,819	39952829.22	0.44	0.19	33.27
Ethiopia	ETH	725	138616078.3	-0.81	0.66	18.64
Fiji	FJI	4,334	66657410.33	-0.56	0.32	21.56
Finland	FIN	32,880	415412759.1	1.40	1.97	44.65
France	FRA	32,121	385039603.8	1.35	1.83	44.03

Country	Code	GDP PPP=x	(x - μ)^2	z	(z - μ_con)^2	x_GDP_PPP
Gambia, The	GMB	1,238	126780617.9	-0.78	0.60	19.05
Georgia	GEO	4,038	71568316.83	-0.58	0.34	21.32
Germany	DEU	32,463	398581222	1.38	1.89	44.31
Ghana	GHA	1,340	124509197.8	-0.77	0.59	19.14
Greece	GRC	27,350	220569637.7	1.02	1.05	40.17
Guatemala	GTM	4,441	64924884.84	-0.56	0.31	21.64
Guinea	GIN	962	133082663.5	-0.80	0.63	18.83
Guinea-Bissau	GNB	474	144589633.3	-0.83	0.69	18.44
Guyana	GUY	3,559	79915052.82	-0.62	0.38	20.93
Haiti	HTI	1,241	126724505.8	-0.78	0.60	19.06
Honduras	HND	3,821	75297512.98	-0.60	0.36	21.14
Hungary	HUN	18,262	33221379.41	0.40	0.16	32.82
Iceland	ISL	37,049	602729900.2	1.69	2.86	48.02
India	IND	2,317	103651721.7	-0.70	0.49	19.93
Indonesia	IDN	3,459	81713192.24	-0.62	0.39	20.85
Iran	IRN	9,838	7076094.54	-0.18	0.03	26.01
Iraq	IRQ					
Ireland	IRL	40,806	801306519.4	1.95	3.81	51.06
Israel	ISR	25,640	172709720.7	0.91	0.82	38.79
Italy	ITA	29,366	284534688.3	1.16	1.35	41.81
Jamaica	JAM	7,436	25623630.96	-0.35	0.12	24.07
Japan	JPN	32,052	382346012.1	1.35	1.82	43.98
Jordan	JOR	4,608	62257575.1	-0.54	0.30	21.78
Kazakhstan	KAZ	9,779	7395070.861	-0.19	0.04	25.96
Kenya	KEN	1,549	119882614.7	-0.75	0.57	19.31
Kuwait	KWT	38,096	655257299	1.76	3.11	48.87
Kyrgyzstan	KGZ	1,820	114022416.7	-0.74	0.54	19.52
Laos	LAO	1,889	112556248.3	-0.73	0.53	19.58
Latvia	LVA	15,350	8130493.611	0.20	0.04	30.47
Lebanon	LBN	10,699	3238376.449	-0.12	0.02	26.71
Lesotho	LSO	1,215	127302635.5	-0.78	0.60	19.04
Liberia	LBR	333	147979803.4	-0.84	0.70	18.32
Libya	LBY	12,640	20204.07609	0.01	0.00	28.28
Lithuania	LTU	15,774	10728625.39	0.23	0.05	30.81
Luxembourg	LUX	75,442	3961975970	4.34	18.82	79.08
Macedonia	MKD	7,899	21151058.15	-0.32	0.10	24.44
Madagascar	MDG	921	134031605.2	-0.80	0.64	18.80
Malawi	MWI	729	138502628.2	-0.81	0.66	18.64
Malaysia	MYS	12,465	1119.568726	0.00	0.00	28.13
Maldives	MDV	4,166	69427172.58	-0.57	0.33	21.42
Mali	MLI	1,003	132139323.2	-0.79	0.63	18.86
Malta	MLT	21,821	86915775.32	0.64	0.41	35.70
Mauritania	MRT	1,985	110516418.9	-0.72	0.53	19.66
Mauritius	MUS	10,462	4147759.751	-0.14	0.02	26.51
Mexico	MEX	13,457	918730.0003	0.07	0.00	28.94
Moldova	MDA	2,713	95750647.03	-0.67	0.45	20.25
Mongolia	MNG	2,895	92216302.17	-0.66	0.44	20.39
Montenegro	MNP	8,909	12879528.2	-0.25	0.06	25.26
Morocco	MAR	3,946	73145683.14	-0.59	0.35	21.24
Mozambique	MOZ	782	137260999.6	-0.81	0.65	18.68
Namibia	NAM	5,021	55907442.49	-0.52	0.27	22.11
Nepal	NPL	1,028	131575374.6	-0.79	0.63	18.88
Netherlands	NLD	37,311	615688196.8	1.71	2.93	48.23
New Zealand	NZL	25,364	165519418.8	0.89	0.79	38.57
Nicaragua	NIC	2,525	99461246.74	-0.69	0.47	20.09
Niger	NER	649	140397686.2	-0.82	0.67	18.58
Nigeria	NGA	1,916	111987718	-0.73	0.53	19.60
North Korea	PRK					

Country	Code	GDP PPP=x	(x - µ)^2	z	(z - µ_con)^2	x_GDP_PPP
Norway	NOR	50,235	1424040341	2.60	6.77	58.69
Oman	OMN	22,165	93456980.14	0.67	0.44	35.98
Pakistan	PAK	2,417	101633274.2	-0.69	0.48	20.01
Panama	PAN	9,200	10880636.33	-0.23	0.05	25.49
Papa New Guinea	PNG	1,852	113340296	-0.73	0.54	19.55
Paraguay	PRY	4,194	68956880.31	-0.57	0.33	21.44
Peru	PER	7,094	29203226.34	-0.37	0.14	23.79
Philippines	PHL	3,130	87756481.67	-0.65	0.42	20.58
Poland	POL	14,890	5722716.734	0.16	0.03	30.10
Portugal	PRT	20,868	70062023.25	0.58	0.33	34.93
Qatar	QAT	79,838	4534686784	4.64	21.54	82.63
Romania	ROM	10,433	4264836.085	-0.14	0.02	26.49
Russia	RUS	13,182	467318.5892	0.05	0.00	28.71
Rwanda	RWA	843	135835457.6	-0.80	0.65	18.73
Saudi Arabia	SAU	22,033	90913842.08	0.66	0.43	35.87
Senegal	SEN	1,610	118545124.3	-0.75	0.56	19.35
Serbia	YUG	9,141	11270046.27	-0.23	0.05	25.45
Sierra Leone	SLE	648	140432334.7	-0.82	0.67	18.58
Singapore	SGP	46,893	1182985004	2.37	5.62	55.98
Slovakia	SVK	17,882	28989287.05	0.37	0.14	32.52
Slovenia	SVN	24,987	155962733.2	0.86	0.74	38.26
Solomon Islands	SLB	1,743	115674627.3	-0.74	0.55	19.46
Somalia	SOM					
South Africa	ZAF	9,136	11304415.45	-0.23	0.05	25.44
South Korea	KOR	23,084	112070129.7	0.73	0.53	36.72
Spain	ESP	28,809	266050745	1.12	1.26	41.36
Sri Lanka	LKA	3,920	73589649.25	-0.59	0.35	21.22
Sweden	SWE	34,887	501269024.5	1.54	2.38	46.27
Switzerland	CHE	38,953	699882582.9	1.82	3.33	49.56
Syria	SYR	4,314	66986923.48	-0.56	0.32	21.54
Taiwan	TWN	28,028	241190840.6	1.07	1.15	40.72
Tajikistan	TJK	1,674	117151355.1	-0.75	0.56	19.41
Tanzania	TZA	1,164	128465176.8	-0.78	0.61	18.99
Thailand	THA	7,402	25972201.9	-0.35	0.12	24.04
Togo	TGO	789	137106230.1	-0.81	0.65	18.69
Trinidad and Tobago	TTO	17,015	20398573.91	0.31	0.10	31.82
Tunisia	TUN	6,968	30580269.11	-0.38	0.15	23.69
Turkey	TUR	12,102	156550.7582	-0.03	0.00	27.84
Turkmenistan	TKM	4,585	62617404.15	-0.55	0.30	21.76
Uganda	UGA	991	132421450.5	-0.79	0.63	18.85
Ukraine	UKR	6,269	38801574.15	-0.43	0.18	23.12
United Arab Emirates	ARE	36,498	576006530.1	1.65	2.74	47.58
United Kingdom	GBR	33,849	455866825.5	1.47	2.17	45.43
United States	USA	44,063	996361664.4	2.18	4.73	53.69
Uruguay	URY	10,585	3660999.9	-0.13	0.02	26.61
Uzbekistan	UZB	2,155	106971173.5	-0.71	0.51	19.80
Venezuela	VEN	11,157	1797597.04	-0.09	0.01	27.08
Vietnam	VNM	2,357	102842415.4	-0.70	0.49	19.96
Yemen	YEM	2,276	104495171.1	-0.70	0.50	19.89
Zambia	ZMB	1,241	126721218.8	-0.78	0.60	19.06
Zimbabwe	ZWE	195	151356696.9	-0.85	0.72	18.21
		12,498.14	34,307,829,522.21	0.00	163.00	
Z-Transformation variables:		µ	∑	µ_con	∑_con	
		14507.84		1.00		
		σ		σ_con		

(Source: Own illustration)

I. Correlation Data for Life Expectancy 2006

Key:

GDP PPP=x ....gross domestic product based on purchasing-power-parity per capita[235]

z ....z-transformed "GDP PPP=x"-values[236]

x_GDP_PPP ......re-transformed z-values[237]

μ_con ....control mean value[238]

σ_con ....control standard deviation[238]

Afghanistan ....missing values

Explanation:

The mean value and the standard deviation ($\mu=28.16$; $\sigma=11.74$) of the FH scale is used for the re-transformation calculations.[239]

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[235] See WDI 2008

[236] See Tab. 3: Formulas for Z-Transformation, 84

[237] See Tab. 4: Re-Transformation of z-values, 84

[238] The z-transformation transforms a random distribution into a distribution with a mean value of zero and a standard deviation of one (Bortz 1999, 756).

[239] See Appendix F. Freedom House – Operationalization for 2006, 121

Country	Code	LE=x	(x - μ)^2	z	(z - μ_con)^2	x_LE
Afghanistan	AFG					
Albania	ALB	76.34	77.27	0.80	0.64	37.55
Algeria	DZA	71.99	19.72	0.40	0.16	32.90
Angola	AGO	42.36	634.52	-2.29	5.25	1.27
Argentina	ARG	75.03	55.95	0.68	0.46	36.15
Armenia	ARM	71.6	16.40	0.37	0.14	32.49
Australia	AUS	81	180.91	1.22	1.50	42.52
Austria	AUT	79.84	151.05	1.12	1.25	41.28
Azerbaijan	AZE	72.33	22.85	0.43	0.19	33.27
Bahamas	BHS	72.91	28.73	0.49	0.24	33.88
Bahrain	BHR	75.66	65.78	0.74	0.54	36.82
Bangladesh	BGD	63.66	15.13	-0.35	0.13	24.01
Barbados	BRB	76.77	85.01	0.84	0.70	38.01
Belarus	BLR	68.59	1.08	0.09	0.01	29.27
Belgium	BEL	79.48	142.33	1.09	1.18	40.90
Belize	BLZ	71.9	18.92	0.40	0.16	32.81
Benin	BEN	56.2	128.82	-1.03	1.07	16.04
Bhutan	BTN	65.26	5.24	-0.21	0.04	25.72
Bolivia	BOL	65.18	5.62	-0.22	0.05	25.63
Bosnia-Herzegovina	BIH	74.57	49.28	0.64	0.41	35.66
Botswana	BWA	49.78	315.76	-1.62	2.61	9.19
Brazil	BRA	72.08	20.52	0.41	0.17	33.00
Brunei	BRN	77.13	91.78	0.87	0.76	38.39
Bulgaria	BGR	72.61	25.61	0.46	0.21	33.56
Burkina Faso	BFA	51.87	245.85	-1.43	2.04	11.42
Burma (Myanmar)	MMR	61.65	34.81	-0.54	0.29	21.86
Burundi	BDI	49.05	342.24	-1.68	2.83	8.41
Cambodia	KHM	58.93	74.30	-0.78	0.62	18.96
Cameroon	CMR	50.28	298.24	-1.57	2.47	9.72
Canada	CAN	80.36	164.10	1.17	1.36	41.84
Cape Verde	CPV	71	11.90	0.31	0.10	31.85
Central African Republic	CAF	44.38	536.84	-2.11	4.44	3.42
Chad	TCD	50.6	287.29	-1.54	2.38	10.06
Chile	CHL	78.29	115.35	0.98	0.95	39.63
China	CHN	72	19.80	0.40	0.16	32.91
Colombia	COL	72.59	25.40	0.46	0.21	33.54
Comoros	COM	63.24	18.57	-0.39	0.15	23.56
Congo (Brazzaville)	COG	54.79	162.81	-1.16	1.35	14.54
Costa Rica	CRI	78.66	123.44	1.01	1.02	40.02
Cote D'Ivoire	CIV	48.08	379.07	-1.77	3.14	7.37
Croatia	HRV	75.82	68.40	0.75	0.57	36.99
Cuba	CUB	78.04	110.05	0.95	0.91	39.36
Cyprus	CYP	79.29	137.83	1.07	1.14	40.70
Czech Republic	CZE	76.48	79.75	0.81	0.66	37.70
Denmark	DNK	78.1	111.31	0.96	0.92	39.43
Djibouti	DJI	54.48	170.82	-1.19	1.41	14.21
Dominican Republic	DOM	72.03	20.07	0.41	0.17	32.95
DR Congo (Zaire)	ZAR	46.12	459.23	-1.95	3.80	5.28
Ecuador	ECU	74.83	53.00	0.66	0.44	35.94
Egypt	EGY	71.01	11.97	0.31	0.10	31.86
El Salvador	SLV	71.54	15.92	0.36	0.13	32.42
Equatorial Guinea	GNQ	51.1	270.59	-1.50	2.24	10.60
Eritrea	ERI	57.31	104.85	-0.93	0.87	17.23
Estonia	EST	72.57	25.20	0.46	0.21	33.52
Ethiopia	ETH	52.48	227.10	-1.37	1.88	12.07
Fiji	FJI	68.59	1.08	0.09	0.01	29.27
Finland	FIN	79.23	136.43	1.06	1.13	40.63
France	FRA	80.56	169.27	1.18	1.40	42.05

Country	Code	LE=x	(x - μ)^2	z	(z - μ_con)^2	x_LE
Gambia, The	GMB	59.15	70.56	-0.76	0.58	19.19
Georgia	GEO	70.72	10.05	0.29	0.08	31.55
Germany	DEU	79.13	134.10	1.05	1.11	40.53
Ghana	GHA	59.7	61.62	-0.71	0.51	19.78
Greece	GRC	79.41	140.67	1.08	1.16	40.83
Guatemala	GTM	69.91	5.57	0.21	0.05	30.68
Guinea	GIN	55.52	144.72	-1.09	1.20	15.32
Guinea-Bissau	GNB	46.19	456.24	-1.94	3.78	5.36
Guyana	GUY	66.28	1.61	-0.12	0.01	26.81
Haiti	HTI	60.32	52.27	-0.66	0.43	20.44
Honduras	HND	69.89	5.48	0.21	0.05	30.66
Hungary	HUN	73.09	30.69	0.50	0.25	34.08
Iceland	ISL	81.17	185.51	1.24	1.54	42.70
India	IND	64.47	9.48	-0.28	0.08	24.87
Indonesia	IDN	68.16	0.37	0.06	0.00	28.81
Iran	IRN	70.65	9.61	0.28	0.08	31.47
Iraq	IRQ					
Ireland	IRL	79.39	140.19	1.08	1.16	40.80
Israel	ISR	80.02	155.51	1.13	1.29	41.48
Italy	ITA	81.08	183.07	1.23	1.52	42.61
Jamaica	JAM	71.12	12.75	0.32	0.11	31.97
Japan	JPN	82.32	218.16	1.34	1.81	43.93
Jordan	JOR	72.2	21.62	0.42	0.18	33.13
Kazakhstan	KAZ	66.16	1.93	-0.13	0.02	26.68
Kenya	KEN	53.44	199.09	-1.28	1.65	13.10
Kuwait	KWT	77.66	102.22	0.92	0.85	38.96
Kyrgyzstan	KGZ	67.7	0.02	0.01	0.00	28.32
Laos	LAO	63.86	13.61	-0.34	0.11	24.22
Latvia	LVA	70.86	10.96	0.30	0.09	31.70
Lebanon	LBN	71.78	17.89	0.38	0.15	32.68
Lesotho	LSO	42.93	606.13	-2.24	5.02	1.87
Liberia	LBR	45.27	496.39	-2.03	4.11	4.37
Libya	LBY	73.98	41.35	0.59	0.34	35.03
Lithuania	LTU	71.04	12.18	0.32	0.10	31.89
Luxembourg	LUX	79.18	135.26	1.06	1.12	40.58
Macedonia	MKD	73.99	41.48	0.59	0.34	35.04
Madagascar	MDG	58.99	73.27	-0.78	0.61	19.02
Malawi	MWI	47.61	397.59	-1.81	3.29	6.87
Malaysia	MYS	74.05	42.25	0.59	0.35	35.10
Maldives	MDV	67.92	0.14	0.03	0.00	28.56
Mali	MLI	53.78	189.61	-1.25	1.57	13.46
Malta	MLT	78.55	121.01	1.00	1.00	39.91
Mauritania	MRT	63.75	14.44	-0.35	0.12	24.10
Mauritius	MUS	73.17	31.59	0.51	0.26	34.16
Mexico	MEX	74.47	47.89	0.63	0.40	35.55
Moldova	MDA	68.53	0.96	0.09	0.01	29.21
Mongolia	MNG	67.17	0.14	-0.03	0.00	27.76
Montenegro	MNP	74.42	47.20	0.63	0.39	35.50
Morocco	MAR	70.7	9.92	0.29	0.08	31.53
Mozambique	MOZ	42.46	629.50	-2.28	5.21	1.37
Namibia	NAM	52.5	226.50	-1.37	1.87	12.09
Nepal	NPL	63.23	18.66	-0.39	0.15	23.55
Netherlands	NLD	79.7	147.63	1.11	1.22	41.13
New Zealand	NZL	79.93	153.27	1.13	1.27	41.38
Nicaragua	NIC	72.48	24.31	0.45	0.20	33.43
Niger	NER	56.42	123.87	-1.01	1.03	16.28
Nigeria	NGA	46.78	431.38	-1.89	3.57	5.99
North Korea	PRK	66.97	0.34	-0.05	0.00	27.54

Country	Code	LE=x	(x - μ)^2	z	(z - μ_con)^2	x_LE
Norway	NOR	80.33	163.33	1.16	1.35	41.81
Oman	OMN	75.51	63.37	0.72	0.52	36.66
Pakistan	PAK	65.21	5.47	-0.21	0.05	25.66
Panama	PAN	75.4	61.63	0.71	0.51	36.54
Papa New Guinea	PNG	57.32	104.65	-0.93	0.87	17.24
Paraguay	PRY	71.65	16.81	0.37	0.14	32.54
Peru	PER	71.12	12.75	0.32	0.11	31.97
Philippines	PHL	71.39	14.75	0.35	0.12	32.26
Poland	POL	75.14	57.61	0.69	0.48	36.27
Portugal	PRT	78.38	117.29	0.99	0.97	39.73
Qatar	QAT	75.5	63.21	0.72	0.52	36.65
Romania	ROM	72.18	21.44	0.42	0.18	33.11
Russia	RUS	65.56	3.96	-0.18	0.03	26.04
Rwanda	RWA	45.59	482.23	-2.00	3.99	4.71
Saudi Arabia	SAU	72.58	25.30	0.46	0.21	33.53
Senegal	SEN	62.76	22.94	-0.44	0.19	23.05
Serbia	YUG	72.78	27.36	0.48	0.23	33.75
Sierra Leone	SLE	42.24	640.58	-2.30	5.30	1.14
Singapore	SGP	79.85	151.30	1.12	1.25	41.30
Slovakia	SVK	74.2	44.23	0.61	0.37	35.26
Slovenia	SVN	77.67	102.42	0.92	0.85	38.97
Solomon Islands	SLB	63.33	17.81	-0.38	0.15	23.66
Somalia	SOM	47.69	394.41	-1.81	3.27	6.96
South Africa	ZAF	50.71	283.58	-1.53	2.35	10.18
South Korea	KOR	78.5	119.91	1.00	0.99	39.85
Spain	ESP	80.8	175.57	1.21	1.45	42.31
Sri Lanka	LKA	74.97	55.06	0.68	0.46	36.08
Sweden	SWE	80.77	174.77	1.20	1.45	42.28
Switzerland	CHE	81.51	194.89	1.27	1.61	43.07
Syria	SYR	73.9	40.33	0.58	0.33	34.94
Taiwan	TWN					
Tajikistan	TJK	66.51	1.08	-0.09	0.01	27.05
Tanzania	TZA	51.89	245.23	-1.42	2.03	11.44
Thailand	THA	70.24	7.24	0.24	0.06	31.03
Togo	TGO	58.2	87.42	-0.85	0.72	18.18
Trinidad and Tobago	TTO	69.58	4.12	0.18	0.03	30.33
Tunisia	TUN	73.62	36.85	0.55	0.31	34.64
Turkey	TUR	71.49	15.53	0.36	0.13	32.37
Turkmenistan	TKM	63.01	20.61	-0.41	0.17	23.31
Uganda	UGA	50.74	282.57	-1.53	2.34	10.21
Ukraine	UKR	68.04	0.24	0.04	0.00	28.69
United Arab Emirates	ARE	79.32	138.54	1.07	1.15	40.73
United Kingdom	GBR	79.14	134.33	1.05	1.11	40.54
United States	USA	77.85	106.10	0.94	0.88	39.16
Uruguay	URY	75.73	66.92	0.74	0.55	36.90
Uzbekistan	UZB	67.5	0.00	0.00	0.00	28.11
Venezuela	VEN	74.4	46.93	0.62	0.39	35.48
Vietnam	VNM	70.85	10.89	0.30	0.09	31.69
Yemen	YEM	62.21	28.51	-0.49	0.24	22.46
Zambia	ZMB	41.67	669.76	-2.35	5.54	0.53
Zimbabwe	ZWE	42.69	618.01	-2.26	5.12	1.62
		67.55	19810.84	0.00	164.00	
Z-Transformation variables:		μ	∑	μ_con	∑_con	
		10.99		1.00		
		σ		σ_con		

(Source: Own illustration)

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Abstract

Indexkombination stellt die neueste Entwicklung im Forschungsbereich der Demokratiemessung dar. Im Rahmen der vorliegenden Arbeit wird ein experimenteller Meta-Index, der QD-Index, sowohl theoretisch konzeptualisiert als auch praktisch operationalisiert. Dazu werden Indices wie Worldwide Governance Indicators, Freedom House sowie der Vanhanen Index für das Untersuchungsjahr 2006 kombiniert. Der QD-Index ermöglicht einer reliablere und validere Messung von Demokratiequalität auf globaler Ebene, da er die Stärken der jeweiligen Ausgangsindices miteinander vereint. Dennoch bleibt ein gewisser Bias der Ergebnisse erhalten, welcher auf die methodischen Besonderheiten der verarbeiteten Indices zurückzuführen ist.

Kernbegriffe: Demokratiequalität, Freedom House, Indexkombination, Konzeptvalidierung, QD-Index (QDI), Vanhanen Index, Worldwide Governance Indicators

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