

**East Africa Collaborative Ph.D. Program
in Economics and Management**

**Africa on the Maps of Global Values:
A Comparative Analysis based on the
Recent *World Values Survey* Data**

Almas HESHMATI and Arno TAUSCH

**East Africa Research Papers in Economics and
Finance**

EARP-EF No. 2018:38

Jönköping International Business School (JIBS),
Jönköping University, P.O. Box 1026,
SE-551 11 Jönköping, Sweden,
Web: <http://www.ju.se/earp>, E-mail: EARP@ju.se

Preface

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Editor: Almas Heshmati
Professor of Economics
Jönköping International Business School (JIBS),
Jönköping University, Room B5017,
P.O. Box 1026, SE-551 11 Jönköping, Sweden,
E-mail: Almas.Heshmati@ju.se

Africa on the Maps of Global Values: A Comparative Analysis Based on the Recent *World Values Survey* Data

Almas Heshmati ¹ and Arno Tausch ²

¹ Corresponding Author:

Jönköping International Business School,
Jönköping, Sweden and
Department of Economics, Sogang University,
Seoul, Korea, E-mail: heshmati@sogang.ac.kr

² Innsbruck University and Corvinus University,
Budapest, Hungary, E-mail: arno.tausch@yahoo.de

Abstract

This paper discusses African economic development with the aim of finding its place on the maps of global economic, political and social values. We develop new comparable indices of global values from the latest set of *World Values Survey* data and determine Africa's place on a new factor analytical index of Global Civil Society. Our statistical calculations rely on the so-called oblique rotation of the factors, the so-called promax-rotation of factors underlying the correlation matrix. Our analysis of data from the *World Values Survey* derives 11 factor analytical scales which are compatible with social scientific literature: a non-violent and law-abiding society, democracy movement, climate of personal non-violence, trust in institutions, happiness, good health, no redistributive religious fundamentalism, accepting the market, feminism, involvement in politics, optimism and engagement, no welfare mentality and acceptance of the Calvinist work ethics. African countries' performance with complete data is remarkable. We are especially hopeful about the development of a future democracy in Ghana even though our study also suggests pessimistic tendencies for Egypt and Algeria and for Africa's leading economy, South Africa. However, the recent optimism corresponding to economic and human rights data emerging from Africa is also reflected in our index of the development of civil society showing that there is hope for Africa on this front too.

JEL Classification Numbers: C43; F50; Z12; D73;

Keywords: Index numbers and aggregation; International relations and international political economy; Religion; Bureaucracy; Administrative processes; Corruption;

1. Introduction

This paper tries to close the gap that exists in recent literature on African economic development by establishing Africa's place on the maps of global economic, political and social values. International literature on comparative global economic, social and political values has developed comparative frameworks which can be applied to new emerging cross-national data in a number of African countries (Davidov et al., 2011; Hofstede, 2001; Hofstede and Minkov, 2010; Hofstede et al., 2010; Inglehart and Norris, 2010; Minkov and Hofstede, 2011, 2013; Minkov, 2015; Norris and Inglehart, 2011; Schwartz, 2006a, 2006b, 2007a, 2007b, 2009). Our paper follows the same tradition and develops a new comparable index of global value development from the latest set of *World Values Survey (WVS)* data and determines Africa's place on a new measurement scale of Global Civil Society. Debates about this have gathered pace in recent literature especially on Inglehart's the framework of the new theory of global cultural evolution (Inglehart, 2018).

We did our statistical calculations using the standard SPSS statistical program (SPSS XXIV), available at many academic research centers around the world and relied on the so-called oblique rotation of the factors underlying the correlation matrix. The SPSS routine that we chose is the so-called promax rotation of factors, which is considered to be the best suited in the context of our research. Our analysis of the *World Values Survey* data derived the following 11 factor analytical scales which are well compatible with social scientific literature:

1. A non-violent and law-abiding society
2. Democracy movement
3. Climate of personal non-violence
4. Trust in institutions
5. Happiness, good health
6. No redistributive religious fundamentalism
7. Accepting the market
8. Feminism
9. Involvement in politics
10. Optimism and engagement
11. No welfare mentality, acceptancy of the Calvinist work ethics

The results of the factor analytical scales show that the performance of African countries with complete data is amazing. We are especially hopeful about the development of a future democracy in Ghana. However, our study also suggests pessimistic tendencies for several countries like Egypt and Algeria, and especially for Africa's leading economy, South Africa. High human inequalities as measured by the United Nations Development Program's (UNDP) Human Development Report's (HDR) Index of Human Inequality, further impairs the development of human security. However, recent optimism about economic and human rights data that is emerging from Africa is also reflected in our index of the development of civil society. The index provides a clear picture of the distribution of the 11 key factor analytical scales. They jointly show that there is at least some hope for Africa on this front too.

The rest of the paper is organized as follows: After an introduction to composite indices we debate the theoretical background. This is followed by an overview of the methods and data that we use and a discussion of our most important empirical results. We then

present the conclusions from our findings. The empirical material that we use for our study is presented in the Appendix.

2. The Composite Index Methodology

Following the introduction of the Human Development Index and its annual updates in HDR in recent years (see UNDP, 2018) a rich literature on the quantitative measurement of development outcomes has been developed. These outcomes are often multidimensional and each dimension is represented by several indicators affecting the outcomes. The multidimensionality of the outcomes requires the creation of composite indices to have a single measure of performance and to rank the countries in one unique way. We focus on the construction of indices of the development process that are multidimensional and decomposable into different dimensions. Such indices are a useful tool for quantifying the level of development and also for evaluating the predictors' impact on development. In this section, we introduce the two main approaches of non-parametric and parametric indices and their extensions frequently used in the construction of such indices. Examples of such indices are globalization studies (Dreher, 2006; Heshmati, 2006); inequalities (Maasoumi and Xu, 2015); poverty (Berisso, 2018; Bersisa, 2018; Heshmati and Rashidghalam, 2018); and well-being (Heshmati et al., 2008, 2018).

2.1 Non-parametric Indices

A non-parametric index is a composite index constructed from aggregate indicators of a certain process or outcome. It is constructed by transforming each of the indicators to an index on a scale of one to a 100, where 100 is the maximum value and one is the minimum value. In the aggregation of indicators, a weight must be attached to each indicator. The composite index is computed non-parametrically based on the normalization of the different indicators and their subsequent aggregation using an ad-hoc weighting system. The index is similar to the commonly-used index, UNDP's HDI, which is based on the aggregation of three indicators -- educational attainment, life expectancy and real GDP per capita. The weights of the index's components are constant across countries and chosen on an ad-hoc basis (see Noorbakhsh, 1998). Ideally, the weights attached to each indicator should differ by countries and over time. A heterogeneous weighted system is important as countries are endowed with different resources and their dependency on these resources also changes over time. A simple weighting system uses the square of the normalized indices as a base for the aggregation to obtain the composite index. This weighted system implies that the higher normalized values receive a higher weight than the lower ones. It is a reasonable assumption as higher normalized values are considered to be a result of specialization and better performance.

2.2 Parametric Indices

Two parametric indices are frequently employed for computing an index of a development process: the principal component (PC) and factor analysis (FA). Since the two methods in normalized form give PC scores with unit variance, PC is used more often. A PC analysis is a multivariate technique that is used for examining relationships

within a set of inter-related quantitative variables. In a dataset with J indicators, at most J principal components can be computed; each is a linear combination of the original indicators with coefficients equal to the *Eigen vectors* of the correlation of the covariance matrix. The principal components are sorted according to the descending order of the *Eigen values*, which are equal to the variance of the components.

As part of the analysis, we investigated the *Eigen values* and *Eigen vectors* and used the *Eigen values* bigger than 1.0 in computing the development process index. By looking at the *Eigen vectors*, it becomes evident which indicators form a specific component and the nature of their effects. An indicator with an *Eigen vector* exceeding 0.30 is considered to be a statistically significant contributor to the principal component. In practice, researchers use only the first principal component in the computation of a parametric index and in ranking the units studied. The disadvantage of this method is that it ignores the information embodied in the remaining indicators. One alternative that accounts for the information embodied in all the principal components with an *Eigen value* bigger than one is the weighted average PC index as one can use the explained share of the total variance as weights in the aggregation of the principal components.

All the parametric indices have their own advantages and disadvantages. They can be used for measuring the state of development and attributing it to the possible underlying causes. A breakdown of the index into major components provides possibilities of identifying the factors contributing to the development. The parametric approach does not provide a decomposition of the sub-components. In the case of a non-parametric method the researcher determines the structure of the components.

The advantage of the parametric approach is that the components' distribution is determined by the indicators' statistical relationship instead of being based on an ad-hoc selection of indicators.

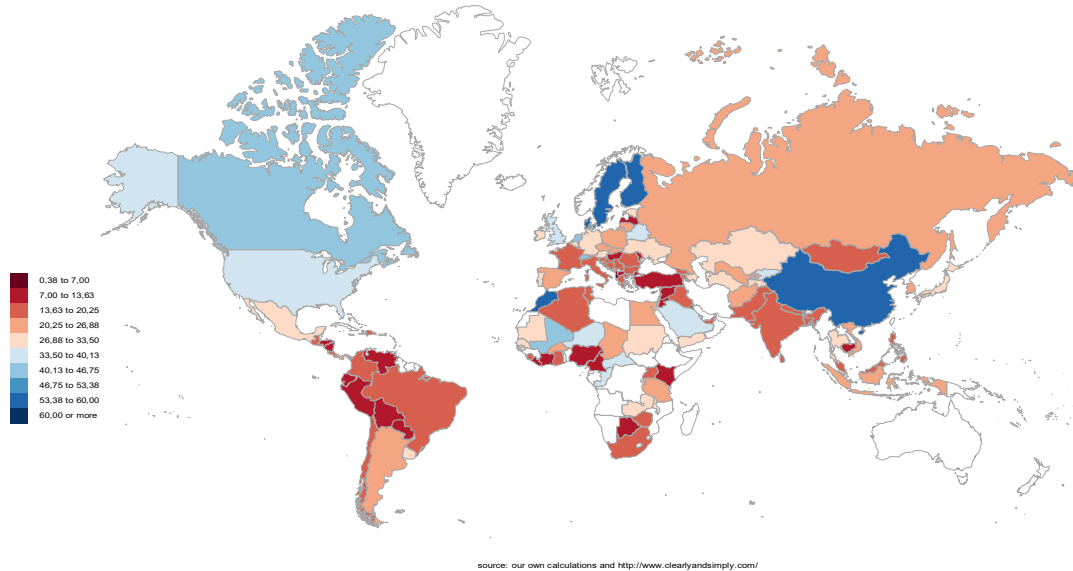
3. New optimism regarding African development

In his new and very encompassing analysis, Inglehart (2018) maintains that people's values and behavior are shaped by the degree to which their survival is secure; it was precarious for most of history, which encouraged emphasizing group solidarity, rejecting outsiders and obedience to strong leaders. High levels of existential security encourage openness to change, diversity and new ideas. Unprecedented global prosperity and security in the post-war era brought cultural changes, the environmentalist movement and the spread of democracy. Inglehart maintains that in recent decades diminishing job security and rising inequalities have led to authoritarian reactions in developed countries. He further maintains that people's motivations and behavior reflect the extent to which they take survival for granted - and that modernization changes them in roughly predictable ways. What is Africa's place in such a macro-sociological scenario?

It should also be recalled that recent literature on global economic development highlights the importance of the factor "*trust*" for economic development (Alesina et al., 2015; Alesina and Giuliano, 2015). Gallup data from the UNDP HDR (2014) projected on to a choropleth map highlights the deficit of trust in most African countries (Map 1). Global empirical evidence suggests that the deficit of trust in several African countries is a problem if we understand economic growth following Alesina's approach, but that

this lack of trust is not unique to Africa and can also be found in large regions of South America and southern and south-eastern Europe, just to mention a few.

Map 1: Gallup/UNDP HDR (2014) data on trust in other people



We attempt nothing more and nothing less than developing an index of civil society in the framework of larger necessary debates about Inglehart's (2018) approach, which works with the following scales and data:

- Attitudes on democracy
- Attitudes on gender equality
- Background data like age, gender, state of health, feeling of happiness, feeling of security
- Confidence in economic and political institutions
- Global citizenship
- Interest in politics
- Positions on the market economy like competition, inequalities, private enterprise
- What is important in life
- What is justifiable and what is not justifiable
- Work ethics
- Xenophobia

The results of our empirical survey reported in Table 1 show that on this front there is room for optimism and hope for Africa in the coming decades. African economic development in some countries has decidedly shifted away from the “*lost continent*” image and the debate has increasingly featured factors such as good governance being decisive for Africa’s future trajectory in world society (Noman, 2012; Pieper et al., 2016). Figures and maps that show several countries in Africa rapidly moving forward in economic development and also in human rights now abound; it suffices here to mention the data from Freedom House (2018).

Insert Table 1 about here

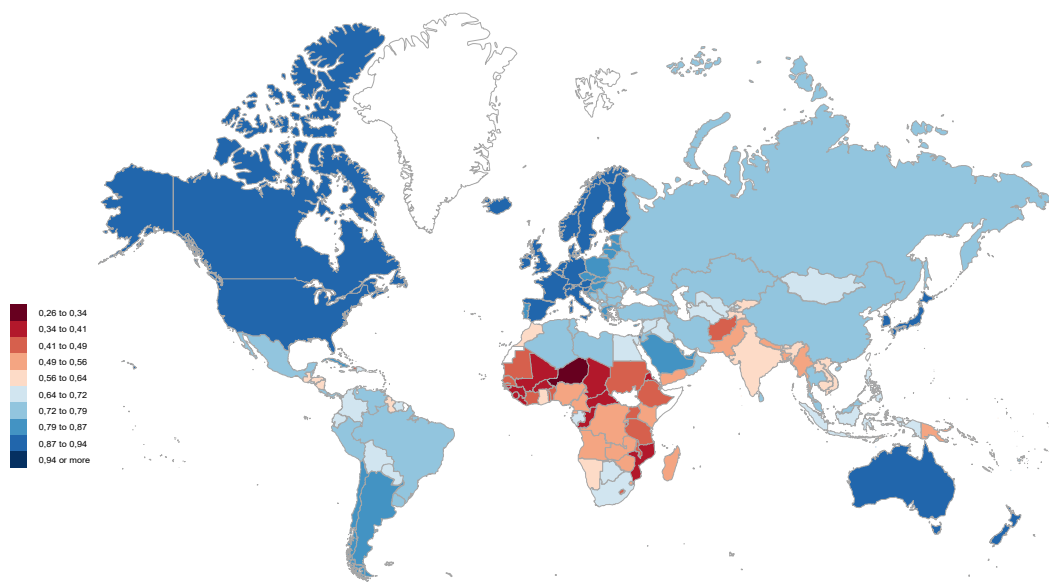
Table 1 shows how freedom advanced in Africa during 2013-18. The table gives freedom scores for 2013 and 2018 ranked by the level in 2018. The table presents changes in freedom scores (2013-18) for 55 African countries. The scores remained unchanged for six countries, while 19 turned positive (improved) and 30 turned negative (deteriorated). The table also provides the global percentile performance in 2018 and percentage changes in 2013-18. The five high performers in 2018 were Cape Verde, Mauritius, Ghana, Sao Tome and Principe and Benin. The five low performing countries were Sudan, Somalia, Equatorial Guinea, Eritrea and South Sudan. Madagascar, Cote d'Ivoire, Mali, Gambia, Tunisia and Guinea-Bissau's positions deteriorated by more than 10 points, while Tanzania, Maldives, Egypt, Gabon, Libya, Central African Republic and South Sudan improved their positions by more than 10 points.

In an international comparison, in 2018 Mauritius, the best placed African country on the scale of global freedom developed by Freedom House (2018), was just one point behind France and ranked equally with European Union members Slovakia and Italy; it was ahead of Latvia and the United States. In 2018, Ghana outperformed the European Union countries Bulgaria and Hungary and was ahead of several European Union membership candidate countries.

Not only has freedom made big strides in Africa in recent years, the economies of several countries also provide hope. The three maps below highlight these optimistic tendencies: the global rankings of several African countries have improved in the UNDP Human Development Index after the global economic crisis of 2008, and in UNDP Human Development growth since 2000. For Inglehart (2018), there is a clear connection between the level of human development, existential security and what he calls “*cultural evolution*” (Inglehart, 2018); we call this the evolution of civil society.

Map 2 provide a picture of the composite HDI in 2013 combining education, income and longevity. North America, Europe, Australia, Japan and South Korea scored the highest, while many sub-Saharan African and some South Asian countries scored the lowest.

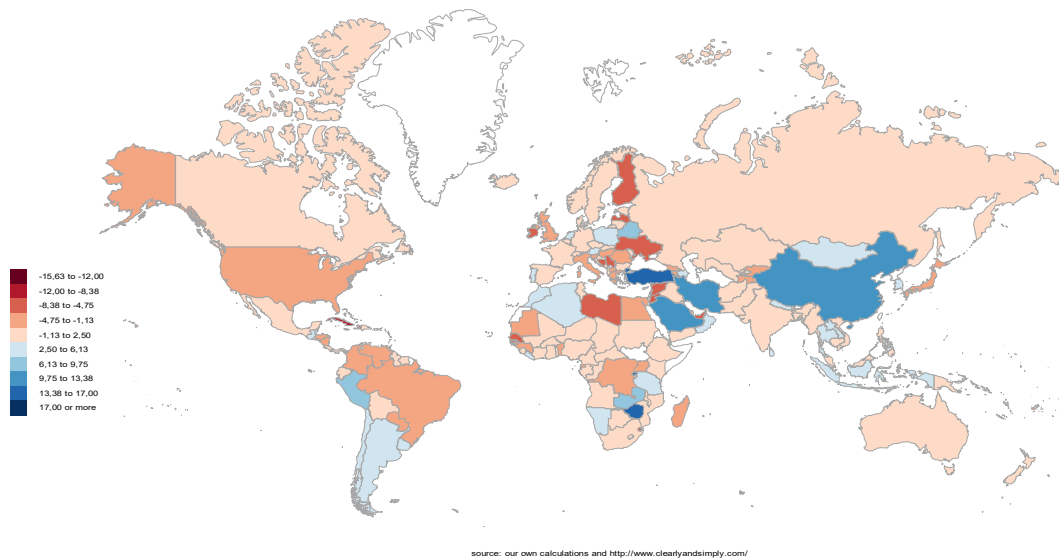
Map 2: UNDP HDI (2013) combining education, income and longevity



source: our own calculations and <http://www.clearlyandsimply.com/>

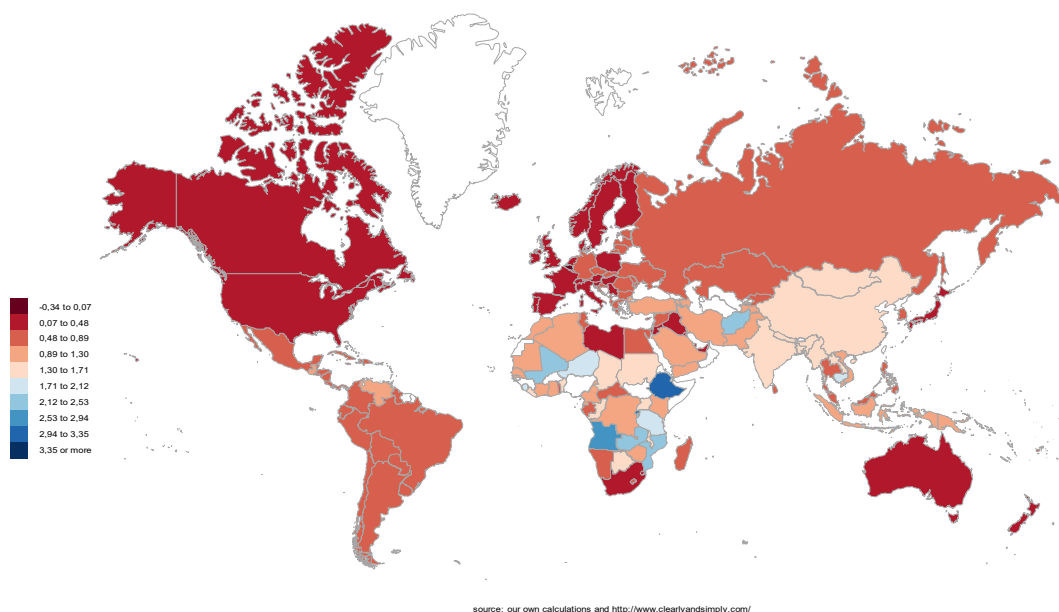
Map 3 shows improvements in the rankings of African countries on HDI's scales (2008-13). As explained earlier, several African countries have experienced large positive and negative changes in their positions. Such changes are also found in countries in Eastern Europe and those around the Black Sea.

Map 3: Improvements in the rankings of African countries on the scales of the UNDP Human Development Index (2008-13)



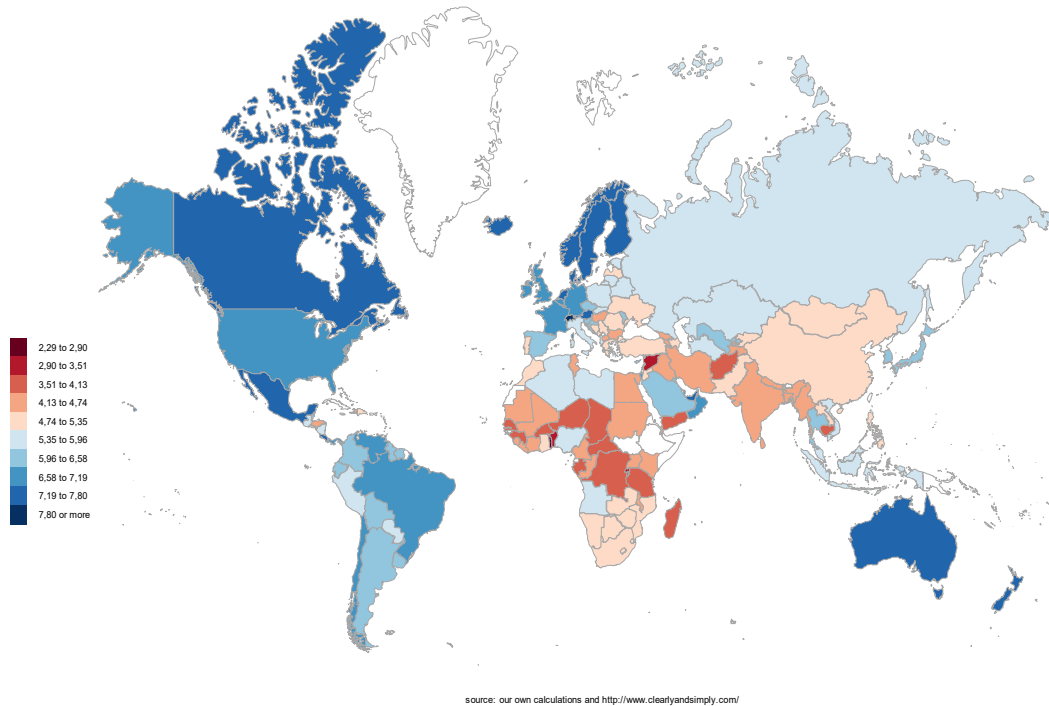
Map 4 reports the average annual human development growth during 2000-13 across the world. Growth in advanced countries was the lowest while it was high in emerging economics. The largest dispersion in the distribution of human development growth was in Africa and in South Asia. Several African countries were the fastest growing in the world.

Map 4: Average annual UNDP Human Development Growth (2000-13)



Inglehart also argues that the rhythm between human development and “*cultural evolution*”, is also conditioned by inequalities (Inglehart, 2018), while other global value research shows the over-riding importance of life satisfaction (Tausch et al., 2014). Map 5 captures the UNDP HDR/Gallup data on overall life satisfaction in 2014. Life satisfaction showed a distribution similar to that of human development. The largest variations in life satisfaction were in Africa, the Middle East and South Asia.

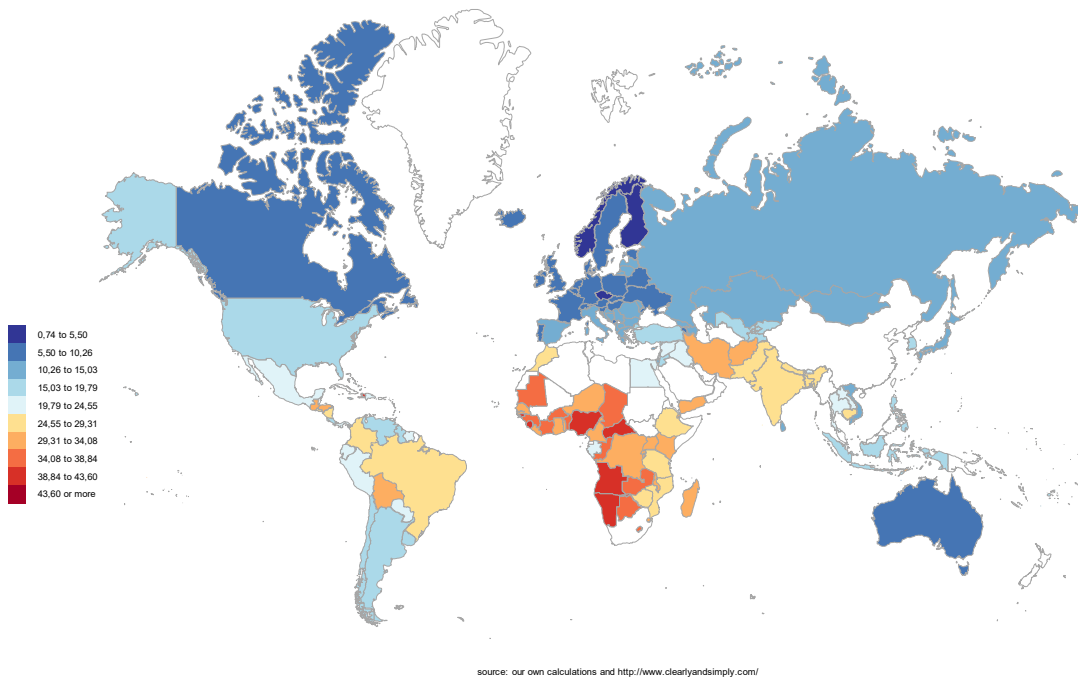
Map 5: Overall life satisfaction – Gallup Poll/UNDP HDR (2014)



The Coefficient of Human Inequality, introduced in the 2014 UNDP HDR as an experimental measure is a simple average of inequalities in health, education and income. The average is calculated by an unweighted arithmetic mean of estimated inequalities in these dimensions. The UNDP emphasizes that when all inequalities are of a similar magnitude, the Coefficient of Human Inequality and the loss in HDI differ negligibly, but when inequalities differ in magnitude, the loss in HDI tends to be higher than that in the Coefficient of Human Inequality.¹ On the basis of available data it must be maintained that the performance of most African countries is very deficient, suggesting that Africa today is the real global focus of human inequality, and that we can find such high rates of human inequalities only in some countries of West Asia, South Asia and in some Latin American nations (Map 6). Thus, inequality must be regarded as one of the main blocks in the spread of human security which is vital in Inglehart’s theory of the evolution of human values (Inglehart and Norris, 2012; Inglehart, 2018).

¹ <http://hdr.undp.org/en/content/what-does-coefficient-human-inequality-measure>

Map 6: UNDP HDR (2014) Coefficient of Human Inequality – An international comparison



The way the world emerged from the 2008 global economic crisis was in a way predicted by Frank (1998) with his theory of a global shift of economic growth away from the Euro-Atlantic area towards China and India, with economic dynamism now extending not only to the rim countries of the Pacific but the Indian Ocean as well. We contribute to the new empirical data on African economic, social and political values in the framework of this realistic and at the same time partially optimistic approach.

4. Theoretical Background of Global Values

Most earlier studies on African values were centered around Hofstede's approach to global values (Beugelsdijk et al., 2017), for which there is very little comparable cross-national value data available for Africa. One recent comprehensive survey (Tausch et al., 2014) showed that the original Hofstede data could only be extracted for Morocco, so the application of Hofstede's approach, which received priority in literature on "*African values*" in economics, would first have to overcome the problem of missing original survey data measuring Hofstede's theory.

According to Hofstede and his school of thought, which still might be relevant in explaining African value development at least in theory, there are four to six basic clusters of international value systems and they are all defined along the scales of how different national societies handle ways of coping with inequalities and uncertainties, an individual's relationship with her or his primary group and the emotional implications of having been born as a girl or as a boy. Hofstede defines the six basic clusters of the dimensions of national culture as:

- Power Distance

- Individualism versus Collectivism
- Masculinity versus Femininity
- Uncertainty Avoidance Index
- Long-Term Orientation
- Indulgence versus Restraint

Some of the empirical factors developed from the new cross-national data from the *World Values Survey*, integrate a sufficient number of representative surveys of African people and resemble the Hofstede factors highlighted earlier.

So, how different or similar is Africa from the rest of the world in its values in light of new cross-national perspectives and data? A systematic social scientific study of global values and opinions that we use has had a long and fruitful history in social sciences (Norris and Inglehart, 2011). Such studies were possible because of the availability of systematic and comparative opinion surveys over time under the auspices of leading representatives of the social science research community featuring the global population with a fairly constant questionnaire for several decades. The original data is made freely available to the global scientific community and this data also renders itself to a systematic and multivariate analysis of opinion structures on the basis of the original anonymous interview data.² We use data from one such reliable and regularly repeated global opinion survey: The *World Values Survey (WVS)*.

The *World Values Survey*, which was started in 1981, consists of nationally representative surveys using a common questionnaire. The survey is conducted in approximately 100 countries which make up some 90 percent of the world's population. Africa is now much better presented in the survey. WVS has become the largest non-commercial, cross-national, time-series investigation of human beliefs and values ever conducted. As the time of writing this article, it included interviews with almost 400,000 respondents. The countries included in the WVS project comprise practically all of the world's major cultural zones.

As highlighted earlier, leading economists have become interested in studying global comparative opinion data from the *World Values Survey* (Alesina et al., 2015; Alesina and Giuliano, 2015). An interest in the relationship between religion and economic growth contributed to the rise of the present methodological approach which we also use in our study (McCleary and Barro, 2006a, 2006b).

We focus on African values in the framework of the “*civic culture*” of the respective African societies (Almond and Verba, 2015; Dalton et al., 2014). An analysis of our comparative data shows that a rethink is needed on the entire tradition of empirical comparative value research moving from classical political science research to countries’ “*civic culture*” and even the entire global culture. Here, one encounters the full legacy of 20th-century modern political scientist Gabriel Abraham Almond (1911–2002). With his deep understanding of the normative aspects of human society he perhaps came closest to capturing the dilemmas of Western and non-Western, non-Muslim and Muslim contemporary societies of today as they emerge from empirical data. He did so especially by pointing out the many adverse trends in the civic culture in leading Western democracies themselves, brought about by the current contemporary erosion of social capital and declining civic engagement and civic trust (Almond, 1948, 1996, 2002).

² <http://www.worldvaluessurvey.org/wvs.jsp> and <http://www.europeansocialsurvey.org/>

Almond cites the reasons for this contemporary decline in civic engagement with reference to the work of political scientist Robert D. Putnam who discusses the weakening of the family (Putnam, 1993). A second major factor that Almond cites is the transformation of leisure by the electronic media. This tidal wave of decay in values has started effecting communities in Africa, Asia, Latin America and Oceania as well. The civic culture approach presupposes that a political culture congruent with a stable democracy involves a high degree of consensus concerning the legitimacy of democratic institutions and the content of public policy (see Inglehart 1988; Inglehart and Welzel, 2003; and for a survey of relevant literature, see Tausch, 2016).

Inglehart by contrast developed an interpretation of global value change that rests on a well-known two-dimensional scale of global values and global value change (Inglehart, 2018). This is based on the statistical technique of a factor analysis of up to 20 key *World Values Survey* variables. Inglehart's two dimensions are: (i) the traditional/secular-rational dimension and (ii) the survival/self-expression dimension. These two dimensions explain more than 70 percent of the cross-national variance in a factor analysis of ten indicators, and each of these dimensions is strongly correlated with scores of other important variables. For Inglehart and Baker (2000), all the preindustrial societies showed relatively low levels of tolerance for abortion, divorce and homosexuality; tended to emphasize male dominance in economic and political life, deference to parental authority, and the importance of family life, and were relatively authoritarian; and most of them placed strong emphasis on religion. Advanced industrial societies tended to have the opposite characteristics (Tausch et al., 2014).

Inglehart, therefore, predicted a more or less generalized global increase in human security in parallel with the gradual waning of the religious phenomenon in most of the countries across the globe. Inglehart spells out what tendencies are brought about by the waning of the religious element in advanced Western democracies: higher levels of tolerance for abortion, divorce, homosexuality; the erosion of parental authority and decrease in the importance of family life, etc. When survival is uncertain, cultural diversity seems threatening. When there isn't "enough to go around," foreigners are seen as dangerous outsiders who may take away one's sustenance. People cling to traditional gender roles and sexual norms and emphasize absolute rules and familiar norms in an attempt to maximize predictability in an uncertain world. Conversely, when survival begins to be taken for granted, ethnic and cultural diversity become increasingly acceptable - beyond a certain point, diversity is not only tolerated, it may even be positively valued because it is seen as interesting and stimulating. In advanced industrial societies, people seek out foreign restaurants to taste new cuisine; they pay large sums of money and travel long distances to experience exotic cultures. Changing gender roles and sexual norms no longer seem threatening.

Sociologists working with the unique comparative and longitudinal opinion survey data from the *World Values Survey* have discovered that there are pretty constant and long-term patterns of change in the direction of secularization (Inglehart and Norris, 2003; Inglehart, 2006; Norris and Inglehart, 2011, 2012). For Inglehart, phenomena like bribery, corruption, tax evasion, cheating the state to get government benefits to which one is not entitled as also the countervailing healthy activism by citizens in volunteer organizations, already described by Etzioni (1998), hardly exist. However, the rich database of the *World Values Survey* provides ample evidence about these phenomena and their occurrence in world societies. The economics profession, that is, mathematical,

quantitative economics, has already started making large-scale use of the *World Values Survey* data, integrating the WVS's country level results with international economic growth accounting (Alesina and Giuliano, 2015; Barro and McCleary, 2003). Thus, the art of “*growth accounting*” has received a new and important input (Barro, 1991, 1998, 2004, 2012; Barro and Sala-i-Martin, 1991, 1992; Guiso et al., 2006). Following Hayek (1998) we think that values like hard work - which bring success- competition, which is the essence of a free market economy together with the private ownership of business, play an overwhelming role in 21st century capitalism and cannot be overlooked in empirical global value research.

5. Data and methods used in our comparisons

We use the established methodology of the *World Values Survey*-based comparative opinion research (Davidov et al., 2008; Inglehart, 2006; Norris and Inglehart, 2015; Tausch et al., 2014). We should re-iterate that our methodological approach is within a more general framework for studying African values using the methodology of comparative and opinion-survey based political science (Norris and Inglehart, 2015).

We are well aware of many past valuable attempts to arrive at theologically and social scientifically well-founded comparisons of global values. However, our methodology of evaluating the opinions of the global public from the *World Values Survey* data is based on recent advances in the mathematical statistical factor analysis (Tausch et al., 2014). Such studies are based on existing comparative opinion survey data, which allow projecting the underlying structures of the relationships between the variables.

We did our statistical calculations using the SPSS statistical program (SPSS XXIII),³ available at many academic research centers around the world and relied on the so-called oblique rotation of the factors underlying the correlation matrix (Tausch et al., 2014). The SPSS routine that we chose was the so-called *promax* rotation of factors (Tausch et al., 2014), which in many ways must be considered the best suited rotation of factors in the context of our research.⁴ Since both our data and the statistical methods used are available around the globe, any researcher can repeat our research exercise with the available open data and should be able to reproduce the same results.

5.1 Varimax and Promax Rotation Procedures

The factor analysis examined earlier and the various methods of factor rotation have been conducted in the context of a linear factor analysis of continuous variables. The standard linear factor-analytic methodologies do not work well for dichotomous indicators. This limitation led to the development of non-linear methods. In both the cases, determining the association between items and factors is the same and is made using factor loading which Tabachnick and Fidell (2001) consider the correlation between the factor and items. Strongest loadings above the threshold value of 0.3 are preferred. A non-linear

³ <https://www-01.ibm.com/software/at/analytics/spss/>

⁴ Older approaches often assumed that there was no correlation between the factors best representing the underlying dimensions of the variables. But, for example, in attempting to understand the recent pro-Brexit vote in the United Kingdom it would be ridiculous to assume that, say, there is no correlation between anti-immigration attitudes and anti-European Union attitudes.

factor analysis is often used for identifying both the presence and nature of multidimensionality. The loaded matrix is rotated to amplify the presence of simple unidirectional latent structures. A simple structure from a set of items was defined in Goruch (1983) as when each factor has a few items with high loadings and the rest with loadings near zero.

Using an item response function, Finch (2006) (see also Hambleton et al., 1991) conducted a simulation study to compare the performance of two commonly used methods of rotation, orthogonal (Varimax) and oblique (Promax) to identify the presence of a simple structure. Factor rotation involves a transformation of the initial factor loadings to obtain a greater simple structure without changing the underlying mathematical relationships in the data. Finch suggests the non-linear factor analysis rotation method as the preferred method. Orthogonal rotations assume that the factors are uncorrelated, while the oblique rotations assume that the factors are correlated. The former contains the correlation between the factors, while the latter measures the relationship between the individual factors and items. Promax takes the rotated matrix provided by Varimax and raises the loadings to powers where the transformed loading values reflect the simple structure better than in the case of Varimax (McLeod et al., 2001). Each method has advantages and disadvantages in their application in some circumstances. McDonald (1997), Kieffer (1998) and DeVellis (2003) provide guidelines on decisions regarding which rotation procedure to use. Results of Finch's (2011) simulation study suggest that the two approaches are able to recover the underlying factor structure equally, though the Promax method is better for identifying the simple structure (see also Tausch et al., 2014).

Given the conflicting recommendations in literature, Dien et al., (2005) presented a standard protocol for applying PCA to event-related potential datasets focusing on optimizing PCA. The effects of a covariance versus a correlation matrix, Kaiser normalization versus covariance loadings, truncated versus unrestricted solutions and Varimax versus Promax rotations are tested on simulation datasets. The results show that the correlation matrices resulted in a dramatic misallocation of variance. The Promax rotation yielded much more accurate results than the Varimax rotation. Covariance loadings were inferior to Kaiser normalization. Thus, evidence supports the use of a covariance matrix, Kaiser normalization and Promax rotation.

In each comparison, based on the national factor scores for each of the factors resulting from our research (for surveys of the factor analytical method see Tausch et al., 2014) we evaluated the democratic civil society commitment of the overall population of the respective African and non-African countries.

The roll-out of the data, freely downloaded from the WVS website, was: *G:\Analyses 2016\WVS_Longitudinal_1981_2014_spss_v2015_04_18.sav*. We took great care to ensure that the variables' names reflected the highest numerical values in the questionnaire and thus they might differ from the original variable labels in WVS.

6. Results: Global evidence based on the World Values Survey

Our analysis of the *World Values Survey* data derived the following factor analytical scales of a democratic civil society. The 11 components of the index are well compatible with large social scientific literature:

1. A non-violent and law-abiding society (Tyler and Darley, 1999)
2. Democracy movement (Huntington, 1993)
3. Climate of personal non-violence (APA, 1993)
4. Trust in institutions (Fukuyama, 1995; Alesina and Ferrara, 2000)
5. Happiness, good health (Post, 2005)
6. No redistributive religious fundamentalism (Huntington, 2000)
7. Accepting the market economy (Glahe and Vorhies, 1989; Elzinga, 1999; Hayek, 2012)
8. Feminism (Ferber and Nelson, 2009)
9. Involvement in politics (Lipset, 1959)
10. Optimism and engagement (Oishi et al., 1999)
11. No welfare mentality, acceptance of the Calvinist work ethics (Giorgi and Marsh, 1990)

The 11 components of the index were derived from a set of 39 indicators highly correlated within components but not between components. The 39 *World Values Survey* variables that we used in our analysis are:

1. Not important in life: Family
2. Not important in life: Friends
3. Not important in life: Leisure time
4. Not important in life: Politics
5. Not important in life: Work
6. Not important in life: Religion
7. Feeling of unhappiness
8. State of health (bad) (subjective)
9. Important child qualities: Tolerance and respect for other people
10. Reject neighbors: People who speak a different language
11. Reject: Men make better political leaders than women
12. University is not more important for a boy than for a girl
13. No interest in politics
14. Supporting larger income differences
15. [Private vs] state ownership of business
16. Competition [good or] harmful
17. Hard work does not bring success
18. No confidence: The press
19. No confidence: The police
20. No confidence: The government
21. No confidence: The United Nations
22. Democracy: Governments tax the rich and subsidize the poor
23. Democracy: Religious authorities interpret the laws
24. Democracy: People choose their leaders in free elections
25. Democracy: Civil rights protect people's liberty against oppression.
26. Democracy: Women have the same rights as men
27. Democracy: The state makes people's incomes equal
28. Importance of democracy
29. Justifiable: Claiming government benefits
30. Justifiable: Stealing property
31. Justifiable: Parents beating children

32. Justifiable: Violence against other people
33. Justifiable: Avoiding a fare on public transport
34. Justifiable: Someone accepting a bribe
35. Justifiable: For a man to beat his wife
36. I don't see myself as a world citizen
37. Insecurity in neighborhood
38. Gender (female)
39. Age

Our index's construction was based on the following weighting of our factor scores by the *Eigen values* of the model:

1. A violent and lawless society	4.263
2. Democracy movement	2.574
3. Climate of personal violence	2.260
4. Lack of trust in institutions	1.929
5. Happiness, poor health	1.864
6. Redistributive religious fundamentalism	1.554
7. Rejecting the market economy	1.434
8. Feminism	1.245
9. Distance to politics	1.197
10. Nihilism	1.141
11. Welfare mentality, rejection of the Calvinist work ethics	1.075

1.

It should be noted that the signs of the *Eigen values* listed here are attributed to the positive aspect of each component. The full list of factors, *Eigen values*, percent of variance and its cumulative percentage are presented in Appendix Table 1. The 12 *Eigen values* exceeding the threshold 1.0 jointly explain 53.35 percent of the total variance. The factor loadings of the global model are presented in Appendix Table 2. The factor loadings with an *Eigen vector* exceeding the threshold of 0.40 are marked with a grey background.

We now briefly mention the salient factor loadings, explaining 10 percent or more of a variable:

1. A violent and lawless society:	
Justifiable: Avoiding a fare on public transport	0.796
Justifiable: Stealing property	0.765
Justifiable: Claiming government benefits	0.760
Justifiable: Someone accepting a bribe	0.732
Justifiable: Violence against other people	0.560
Justifiable: For a man to beat his wife	0.451
2. Democracy movement:	
Democracy: Civil rights protect people's liberty against oppression	0.753
Democracy: People choose their leaders in free elections	0.738
Democracy: Women have the same rights as men	0.704
Democracy: Governments tax the rich and subsidize the poor	0.493
Importance of democracy	0.493

Democracy: The state makes people's incomes equal	0.448
3. Climate of personal violence:	
Justifiable: For a man to beat his wife	0.846
Justifiable: Parents beating children	0.795
Justifiable: Violence against other people	0.786
Justifiable: Someone accepting a bribe	0.604
Justifiable: Stealing property	0.587
4. Lack of trust in institutions:	
No confidence: The government	0.776
No confidence: The police	0.717
No confidence: The press	0.715
No confidence: The United Nations	0.637
5. Unhappiness, poor health;	
State of health (bad) (subjective)	0.771
Feeling of unhappiness	0.716
Age	0.440
I don't see myself as a world citizen	0.405
Insecurity in neighborhood	0.364
6. Redistributive religious fundamentalism:	
Democracy: Religious authorities interpret the laws	0.687
not important in life: Religion	-0.596
Democracy: The state makes people's incomes equal	0.460
Democracy: Governments tax the rich and subsidize the poor	0.389
7. Rejecting the market economy:	
Competition [good or] harmful	0.760
Hard work does not bring success	0.733
[Private versus] state ownership of business	0.353
8. Feminism:	
Reject: Men make better political leaders than women	0.717
University is not more important for a boy than for a girl	0.682
Gender (female)	0.555
9. Distance to politics:	
No interest in politics	0.849
Not important in life: Politics	0.837
10. Nihilism:	
Not important in life: Friends	0.690
Not important in life: Leisure time	0.669
Not important in life: Work	0.495
Not important in life: Family	0.478
11. Welfare mentality, rejection of the Calvinist work ethics:	
Supporting larger income differences	-0.677
Not important in life: Work	0.467
Not important in life: Religion	0.400
Democracy: The state makes people's incomes equal	0.395

The correlation matrix of the components of the global civil society index is given in Appendix Table 3. For simplicity only correlation coefficients ± 0.10 are reported. The three largest positive correlations are found between climate and personal violence and a violent and lawless society (0.405), welfare mentality and rejecting the market economy (0.324) and welfare mentality and nihilism (0.295). Three negative correlation coefficients are associated with a climate of personal violence and democracy movement (-0.225), feminism and climate of personal violence (-0.201) and democracy movement and a violent and lawless society (-0.139).

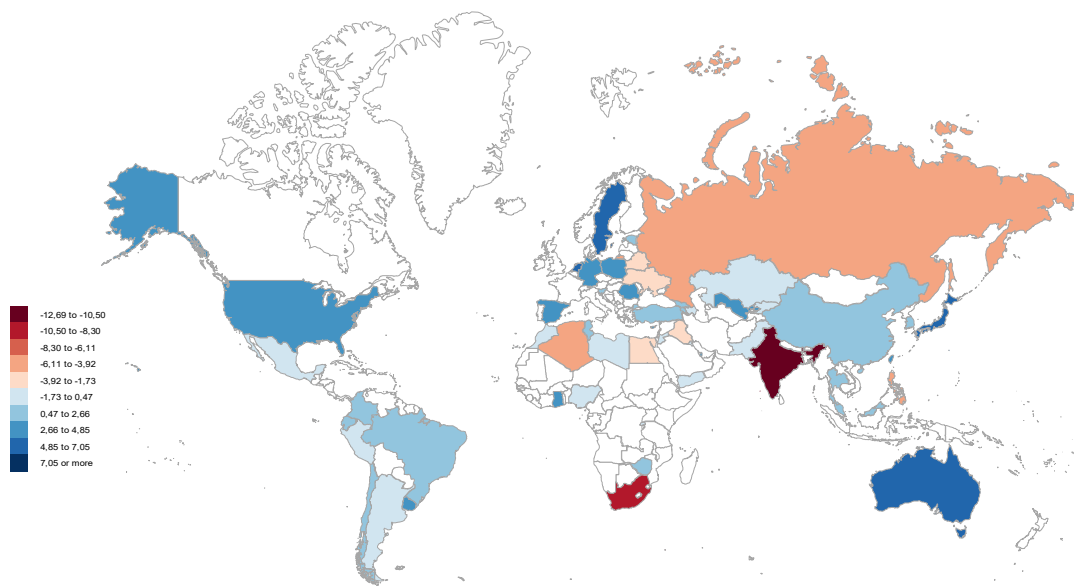
In Table 2, we summarize the results of our study. The table shows the rank and percentile performance of African countries on our scale of the development of the civil society index. The sample contains 54 countries ranked by the index level of which 10 countries are from the African continent. The African countries by rank are: Ghana, Zimbabwe, Tunisia, Rwanda, Morocco, Libya, Nigeria, Egypt, Algeria and South Africa.

Insert Table 2 about here

The spread in the performance of African countries with complete data is amazing. While we are especially hopeful about the development of a future democracy in Ghana, Table 2 does suggest pessimistic tendencies for Egypt and Algeria as also for Africa's leading economy, South Africa. The composite development of the civil society index and the contributing 12 factors' components ranking the countries by the index level is reported in Appendix Table 4.

Our study led to Map 7 which is based on factor scores, weighted by their *Eigen values* documented in Table 2 and Appendix Table 4. The five best performing countries are: Sweden, Trinidad and Tobago, Australia, Japan and Netherlands, while the five worst performing countries are India, South Africa, Philippines, Lebanon and Russia (for details see Table 2 and Appendix Table 4).

Map 7: Overall Composite Civil Society Index



source: our own calculations and <http://www.clearlyandimply.com/>

7. Conclusions and policy perspectives

Our investigation based on a reliable new global value survey shows the great diversity of “*African values*”. Choropleth maps (Appendix Maps 1-11) also suggest the very wide diversity of performances as per the different components of our civil society index. These are now summarized:

African countries among the global top performers in value development are:

- Involvement in politics: Egypt
- Optimism and engagement: Libya, Nigeria
- No welfare mentality, acceptancy of the Calvinist work ethics: Ghana, Zimbabwe

African countries among the global top performers and among the global bottom performers in value development:

- A non-violent and law-abiding society: Among the global top performers: Tunisia;
2. Among the global bottom league performers: South Africa, Algeria
 - Happiness, good health: Among the global top performers: Nigeria, Ghana, Rwanda;
 3. Among the global bottom league performers: Egypt
 - Accepting the market economy: among the global top performers: Ghana, Tunisia, Libya;
 4. Among the global bottom league performers: South Africa

African countries among the global bottom league performers in value development:

- Climate of personal non-violence: Rwanda, South Africa
- Trust in institutions: Tunisia, Egypt, Libya
- No redistributive religious fundamentalism: Egypt
- Feminism: Libya

Overall, we can say that the optimism with regard to economic and human rights data emerging from Africa is also reflected in our index of civil society. There is some hope for Africa, and more egalitarian development and a decisive step away from the hitherto existing high indices of human inequality would accelerate this positive scenario.

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Table 1: The advance of Freedom in Africa, 2013-2018, n=55.

Country/Territory	Freedom Score 2018	Freedom Score 2013	Increase/d ecrease of Freedom	Global percentile performance, 2018	Global percentile performance	Country/Territory	Freedom Score 2018	Freedom Score 2013	Increase/d ecrease of Freedom	Global percentile performance, 2018	Global percentile performance
Cape Verde	90	90	0	19.62	5.74	Guinea-Bissau	41	30	11	67.94	3.83
Mauritius	89	90	-1	22.01	13.40	Guinea	41	39	2	67.46	24.88
Ghana	83	84	-1	29.19	14.83	Morocco	39	43	-4	69.38	39.71
Sao Tome & Principe	82	81	1	31.10	30.62	Uganda	37	40	-3	70.81	34.93
Benin	82	82	0	30.14	6.70	Maldives	35	46	-11	72.25	57.89
South Africa	78	81	-3	35.41	33.49	Algeria	35	35	0	71.77	10.05
Namibia	77	76	1	37.32	32.06	Zimbabwe	30	25	5	76.08	11.00
Senegal	75	75	0	37.80	7.66	Mauritania	30	34	-4	75.12	40.19
Seychelles	71	67	4	41.63	12.92	Egypt	26	41	-15	79.43	61.72
Tunisia	70	59	11	42.58	3.35	Djibouti	26	29	-3	78.95	35.41
Sierra Leone	66	70	-4	45.45	38.76	Angola	26	30	-4	78.47	40.67
Lesotho	64	72	-8	47.37	55.98	Rwanda	23	24	-1	82.30	19.62
Malawi	63	60	3	48.33	18.66	Gabon	23	34	-11	81.34	58.37
Liberia	62	60	2	49.28	24.40	Cameroon	22	23	-1	82.78	20.10
Burkina Faso	60	53	7	51.67	7.18	Congo (Brazzaville)	21	29	-8	84.21	56.94
Madagascar	56	35	21	54.55	0.96	Chad	18	21	-3	86.12	36.36
Zambia	55	62	-7	57.42	51.20	Congo (Kinshasa)	17	20	-3	87.08	36.84
Comoros	55	55	0	55.98	8.61	Swaziland	16	21	-5	88.04	46.89
Tanzania	52	66	-14	59.33	61.24	Ethiopia	12	18	-6	90.91	48.80
Mozambique	52	59	-7	58.37	51.67	Libya	9	43	-34	94.26	65.07
Cote d'Ivoire	51	34	17	59.81	2.39	Central African Rep	9	35	-26	93.30	63.64
Nigeria	50	46	4	60.29	14.83	Sudan	8	7	1	94.74	34.93
Niger	49	56	-7	61.24	52.15	Somalia	7	2	5	96.17	11.96
Kenya	48	55	-7	61.72	52.63	Equatorial Guinea	7	8	-1	95.22	20.57
Togo	47	43	4	62.20	15.31	Eritrea	3	3	0	98.09	10.53
Somaliland	44	46	-2	65.55	28.71	South Sudan	2	31	-29	99.04	64.59
Mali	44	24	20	64.59	1.44						
The Gambia	41	23	18	68.90	1.91						
Guinea-Bissau	41	30	11	67.94	3.83						

Table 2: The ranks and percentile performances of African countries on our scale of the Development of Civil Society, n=54.

Country	Overall Civil Society Index	Global Rank	Percentile Performance	Country	Overall Civil Society Index	Global Rank	Percentile Performance
Sweden	7.047	1	1.695	Rwanda	0.402	32	54.237
Trinidad and Tobago	5.751	2	3.390	Argentina	0.342	33	55.932
Australia	5.487	3	5.085	Morocco	0.249	34	57.627
Japan	5.466	4	6.780	Jordan	0.199	35	59.322
Netherlands	5.216	5	8.475	Libya	0.079	36	61.017
Ghana	4.760	6	10.169	Nigeria	0.042	37	62.712
Germany	4.274	7	11.864	Yemen	-0.205	38	64.407
Uzbekistan	4.250	8	13.559	Azerbaijan	-0.301	39	66.102
Qatar	3.749	9	15.254	Kazakhstan	-0.367	40	67.797
Cyprus	3.500	10	16.949	Kuwait	-0.840	41	69.492
Uruguay	3.496	11	18.644	Peru	-0.931	42	71.186
Spain	3.197	12	20.339	Mexico	-0.947	43	72.881
United States	3.197	13	22.034	Kyrgyzstan	-0.958	44	74.576
Romania	2.920	14	23.729	Pakistan	-1.223	45	76.271
Poland	2.802	15	25.424	Singapore	-1.482	46	77.966
Taiwan	2.745	16	27.119	Hong Kong	-1.876	47	79.661
Georgia	2.562	17	28.814	Belarus	-2.711	48	81.356
Thailand	2.523	18	30.508	Palestinian Occupied Territories	-2.997	49	83.051
Turkey	2.121	19	32.203	Ukraine	-3.060	50	84.746
South Korea	1.906	20	33.898	Iraq	-3.306	51	86.441
Armenia	1.852	21	35.593	Egypt	-3.878	52	88.136
Zimbabwe	1.789	22	37.288	Algeria	-4.422	53	89.831
Brazil	1.752	23	38.983	Bahrain	-4.426	54	91.525
Tunisia	1.656	24	40.678	Russia	-4.609	55	93.220
China	1.514	25	42.373	Lebanon	-5.183	56	94.915
Chile	1.312	26	44.068	Philippines	-5.774	57	96.610
Estonia	1.157	27	45.763	South Africa	-9.691	58	98.305
Malaysia	1.029	28	47.458	India	-10.498	59	100.000
Ecuador	0.945	29	49.153				
Slovenia	0.730	30	50.847				
Colombia	0.631	31	52.542				

Appendix Table 1: The global frame of reference based on the *World Values Survey*: Eigenvalues and percentages of explained variance

Factor component	Factor	Eigenvalue	% of Variance explained	Cumulative %
The violent and lawless society	1	4.263	10.931	10.931
Democracy movement	2	2.574	6.601	17.532
Climate of personal violence	3	2.260	5.794	23.326
Lack of trust in institutions	4	1.929	4.947	28.273
Unhappiness, poor health	5	1.864	4.779	33.052
Redistributive religious fundamentalism	6	1.554	3.986	37.037
Rejecting the market economy	7	1.434	3.676	40.714
Feminism	8	1.245	3.193	43.907
Distance to politics	9	1.197	3.070	46.977
Nihilism	10	1.141	2.926	49.904
Welfare mentality, rejection of the Calvinist work ethics	11	1.075	2.756	52.660
The tolerance and security of the elderly	12	1.049	2.690	55.350

Appendix Table 2: The global model – factor loadings

Indicators contributing to factor components of the Civil Society Index	The violent and lawless society	Democracy movement	Climate of personal violence	Lack of trust in institutions	Unhappiness, poor health	Redistributive religious fundamentalism	Rejecting the market economy	Feminism	Distance to politics	Nihilism	Welfare mentality, rejection of the Calvinist work ethics
not important in life: Family	0.096	-0.031	0.057	-0.002	0.000	-0.287	0.245	-0.147	-0.028	0.478	0.212
not important in life: Friends	0.105	-0.056	-0.029	0.085	0.128	-0.023	0.034	0.047	0.129	<i>0.690</i>	-0.025
not important in life: Leisure time	-0.021	-0.079	0.091	0.024	0.154	0.088	0.025	-0.091	0.080	<i>0.669</i>	0.068
not important in life: Politics	-0.015	0.009	-0.049	0.148	0.035	-0.088	0.067	0.065	<i>0.837</i>	0.236	0.125
not important in life: Work	-0.023	-0.038	0.065	-0.001	0.165	-0.191	0.314	0.005	0.092	0.495	<i>0.467</i>
not important in life: Religion	0.051	0.199	-0.094	0.007	0.034	<i>-0.596</i>	0.265	0.072	0.155	0.216	<i>0.400</i>
Feeling of unhappiness	-0.029	0.045	0.038	0.153	<i>0.716</i>	0.000	0.043	-0.082	0.044	0.139	0.084
State of health (bad) (subjective)	0.049	0.000	-0.086	0.043	<i>0.771</i>	0.033	0.093	0.074	0.005	0.201	0.135
Important child qualities: tolerance and respect for other people	-0.014	0.075	-0.113	0.013	0.057	-0.009	-0.120	0.146	0.052	-0.080	-0.127
Reject neighbors: People who speak a different language	0.153	-0.179	-0.009	0.015	0.026	0.175	0.011	-0.250	-0.024	0.136	0.070
Reject: men make better political leaders than women do	0.043	0.105	-0.156	0.047	-0.054	-0.302	0.046	<i>0.717</i>	0.039	0.023	0.079
University is not more important for a boy than for a girl	-0.129	0.195	-0.147	0.077	0.014	-0.219	-0.114	<i>0.682</i>	0.055	-0.085	-0.071
No interest in politics	0.018	-0.042	-0.051	0.108	0.043	0.019	0.027	0.103	<i>0.849</i>	0.019	0.021
Supporting larger income differences	0.003	-0.084	0.066	-0.026	-0.119	0.010	-0.023	-0.045	-0.029	-0.001	<i>-0.677</i>
[Private vs] state ownership of business	0.070	0.073	-0.056	-0.047	0.181	0.281	0.353	-0.006	0.014	0.024	-0.309
Competition [good or] harmful	0.200	-0.134	0.095	-0.047	-0.006	0.060	<i>0.760</i>	-0.002	0.011	0.118	0.102
Hard work does not bring success	0.133	-0.068	0.072	0.027	0.026	-0.066	<i>0.733</i>	-0.037	0.034	0.053	0.084
No confidence: The Press	-0.046	0.047	-0.038	<i>0.715</i>	0.082	-0.100	-0.035	0.069	0.133	0.038	-0.012
No confidence: The Police	0.081	0.000	-0.035	<i>0.717</i>	0.093	-0.009	0.019	0.062	0.105	0.042	-0.020

No confidence: The Government	0.030	0.030	-0.060	<i>0.776</i>	0.101	-0.095	-0.031	0.074	0.129	0.014	0.018
No confidence: The United Nations	-0.089	-0.061	0.095	<i>0.637</i>	0.140	0.090	0.007	-0.127	0.072	0.033	0.041
Democracy: Governments tax the rich and subsidize the poor.	0.028	0.493	-0.094	-0.018	0.085	0.389	0.178	-0.125	0.057	0.027	0.235
Democracy: Religious authorities interpret the laws.	0.146	-0.002	0.139	-0.037	-0.030	<i>0.687</i>	0.093	-0.215	-0.001	0.039	0.034
Democracy: People choose their leaders in free elections.	-0.189	<i>0.738</i>	-0.139	0.040	0.053	-0.020	-0.155	0.071	-0.004	-0.102	-0.040
Democracy: Civil rights protect people's liberty against oppression.	-0.128	<i>0.753</i>	-0.106	0.020	0.035	0.026	-0.045	0.024	-0.006	-0.073	0.080
Democracy: Women have the same rights as men.	-0.075	<i>0.704</i>	-0.211	-0.036	-0.029	-0.055	-0.044	0.255	0.014	-0.060	0.093
Democracy: The state makes people's incomes equal	0.088	0.448	-0.036	-0.061	0.068	0.460	0.197	-0.138	0.089	0.006	0.395
Importance of democracy	-0.153	0.493	-0.186	-0.060	-0.010	-0.091	-0.208	0.143	-0.145	-0.142	-0.269
Justifiable: claiming government benefits	<i>0.760</i>	-0.101	0.229	-0.019	-0.014	0.083	0.143	-0.069	0.023	0.061	0.034
Justifiable: Stealing property	<i>0.765</i>	-0.209	<i>0.587</i>	-0.036	-0.055	0.096	0.228	-0.100	-0.062	0.102	0.082
Justifiable: Parents beating children	0.212	-0.112	<i>0.795</i>	-0.011	-0.051	0.111	-0.003	-0.108	-0.020	0.002	-0.057
Justifiable: Violence against other people	<i>0.560</i>	-0.181	<i>0.786</i>	-0.006	-0.048	0.023	0.179	-0.118	-0.068	0.087	0.066
Justifiable: avoiding a fare on public transport	<i>0.796</i>	-0.097	0.300	0.022	-0.024	0.039	0.166	-0.031	0.023	0.057	0.069
Justifiable: someone accepting a bribe	<i>0.732</i>	-0.195	<i>0.604</i>	-0.027	-0.056	0.068	0.211	-0.104	-0.044	0.102	0.078
Justifiable: For a man to beat his wife	0.451	-0.172	<i>0.846</i>	-0.019	-0.023	0.111	0.134	-0.189	-0.079	0.064	0.057
I don't see myself as a world citizen	-0.106	0.016	0.104	0.178	0.405	-0.150	0.059	-0.123	0.174	0.041	0.128
Insecurity in neighborhood	0.150	-0.047	-0.047	0.161	0.364	0.080	-0.052	0.120	0.034	0.074	-0.045
Gender (female)	-0.040	-0.097	-0.017	-0.062	0.095	0.303	0.061	<i>0.555</i>	0.160	0.051	0.078
Age	-0.113	0.062	-0.146	-0.071	0.440	-0.069	0.080	0.087	-0.208	0.218	0.193

Appendix Table 3: Correlation matrix of components at the global level. Correlations greater than or equal to +/-0.10

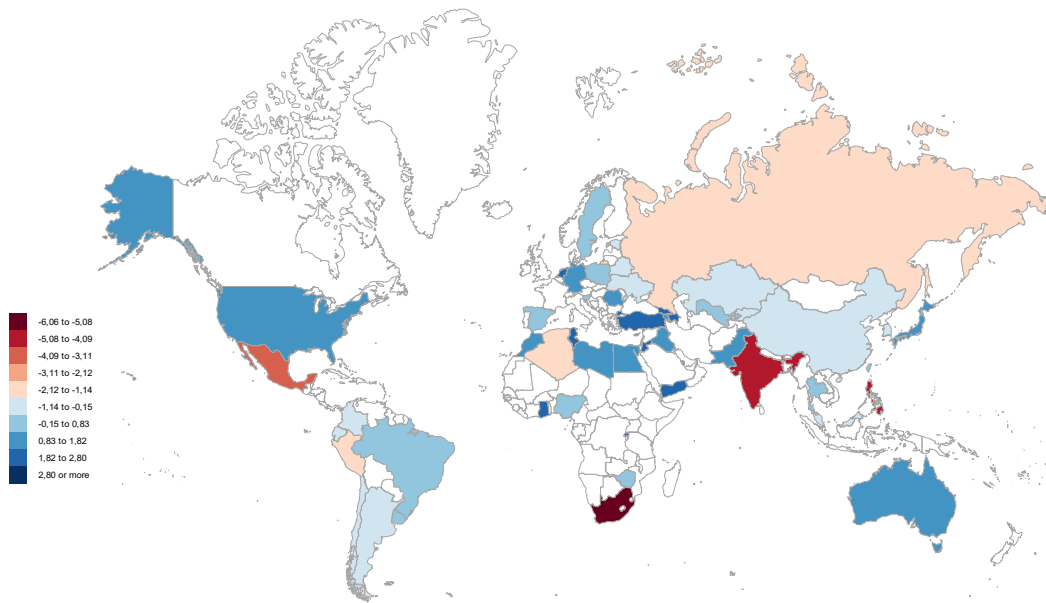
Component	The violent and lawless society	democracy movement	climate of personal violence	lack of trust in institutions	unhappiness, poor health	redistributive religious fundamentalism	rejecting the market economy	feminism	distance to politics	nihilism
democracy movement	-0.139									
climate of personal violence	0.405	-0.225								
lack of trust in institutions										
unhappiness, poor health				0.138						
redistributive religious fundamentalism										
rejecting the market economy	0.236		0.125							
feminism			-0.201			-0.120				
distance to politics				0.161						
nihilism	0.105				0.198	-0.100	0.261		0.101	
welfare mentality, rejection of the Calvinist work ethics		0.120			0.103		0.324	-0.101	0.108	0.295

Appendix Table 4: The overall development of civil society on a global scale – factor scores

	Overall Civil Society Index	The non-violent and law-abiding society	Democracy movement	Climate of personal non-violence	Trust in institutions	Happiness, good health	No redistributive religious fundamentalism	Accepting the market economy	Feminism	Involvement in politics	Optimism and engagement	No welfare mentality, acceptancy of the Calvinist work ethics
Sweden	7.047	0.163	1.741	0.704	0.457	0.429	2.001	-0.080	0.958	0.503	0.309	-0.138
Trinidad &T	5.751	1.802	-0.199	0.166	-0.559	0.524	0.568	1.169	1.070	0.004	0.190	1.015
Australia	5.487	1.104	0.908	0.872	-0.121	0.304	1.810	0.158	0.708	0.053	0.060	-0.368
Japan	5.466	1.479	0.383	1.245	0.403	-0.443	1.689	-0.032	0.155	0.824	0.002	-0.240
Netherlands	5.216	1.878	1.219	0.839	-0.075	-0.109	1.860	-0.726	0.669	0.381	-0.252	-0.467
Ghana	4.760	1.918	-0.586	-0.476	0.724	1.094	-0.271	1.041	-0.155	0.033	0.408	1.031
Germany	4.274	1.583	1.551	0.504	0.286	-0.108	1.480	-0.535	0.350	0.273	-0.290	-0.819
Uzbekistan	4.250	0.561	1.106	-0.059	3.009	0.681	-0.698	0.388	-0.542	0.006	0.130	-0.332
Qatar	3.749	1.775	-1.095	-0.149	1.738	1.267	-1.121	0.032	-0.526	0.505	0.643	0.681
Cyprus	3.500	1.295	0.493	0.929	-0.419	0.080	0.528	0.014	0.528	-0.131	0.467	-0.283
Uruguay	3.496	0.632	0.712	1.024	0.140	0.017	1.016	-0.578	0.862	-0.373	0.139	-0.094
Spain	3.197	0.606	1.545	1.217	-0.415	0.049	0.917	-0.357	0.514	-0.594	0.168	-0.453
USA	3.197	0.837	-0.105	0.292	-0.490	0.110	1.300	0.418	0.668	0.342	0.002	-0.177
Romania	2.920	1.685	1.026	1.081	-0.757	-0.714	0.263	0.464	0.329	-0.437	-0.257	0.236
Poland	2.802	0.574	1.012	1.086	-0.622	-0.084	0.485	-0.458	0.396	-0.111	0.140	0.386
Taiwan	2.745	0.446	1.552	-0.269	-0.151	0.295	0.759	0.229	0.312	-0.553	0.157	-0.031
Georgia	2.562	2.544	-0.350	0.876	-0.768	-1.114	0.153	0.337	0.120	-0.114	0.476	0.403
Thailand	2.523	0.490	0.310	0.989	0.298	0.388	-0.519	-0.240	0.050	0.879	-0.231	0.110
Turkey	2.121	1.819	0.692	1.001	0.367	-0.004	-0.920	-0.280	-0.380	0.086	0.192	-0.453
South Korea	1.906	-0.190	0.175	1.222	0.377	-0.328	0.484	-0.074	0.114	0.016	0.040	0.071
Armenia	1.852	1.377	0.607	0.984	-0.657	-0.579	-0.246	0.288	0.023	-0.321	0.096	0.280
Zimbabwe	1.789	0.554	-0.284	-1.172	0.094	0.393	0.021	0.782	0.242	0.012	0.263	0.885
Brazil	1.752	0.314	0.110	0.389	-0.734	0.119	0.356	0.382	0.701	-0.173	0.074	0.214
Tunisia	1.656	2.181	0.369	-0.134	-1.449	0.033	-0.538	0.893	-0.585	-0.127	0.467	0.547
China	1.514	-0.177	1.264	-0.442	1.632	0.047	1.001	-0.452	-0.202	0.006	-0.304	-0.858
Chile	1.312	-0.335	1.179	1.587	0.006	-0.556	0.168	-0.332	0.484	-0.659	0.141	-0.370
Estonia	1.157	-0.197	1.538	1.077	0.398	-0.952	0.707	-0.498	0.248	-0.381	-0.015	-0.767
Malaysia	1.029	-0.709	0.043	0.082	1.027	0.793	-1.104	0.352	-0.328	0.147	0.253	0.473
Ecuador	0.945	-0.890	-0.625	1.127	-0.153	0.597	-0.466	0.410	0.546	-0.101	0.140	0.362
Slovenia	0.730	0.545	1.027	0.745	-1.054	-0.206	1.237	-0.405	0.509	-0.658	-0.075	-0.935
Colombia	0.631	-0.538	-0.506	0.740	-0.345	0.587	0.092	0.091	0.715	-0.582	0.015	0.363
Rwanda	0.402	2.179	-0.507	-2.507	0.456	1.056	-0.172	0.109	-0.100	0.257	0.238	-0.610

Argentina	0.342	-0.406	0.576	0.945	-0.793	-0.174	0.564	-0.350	0.523	-0.295	-0.086	-0.162
Morocco	0.249	1.168	1.003	0.032	-0.332	0.423	-1.076	0.071	-0.322	-0.463	-0.182	-0.072
Jordan	0.199	2.463	-0.761	0.156	-0.202	-0.132	-1.047	0.233	-0.816	-0.390	0.131	0.565
Libya	0.079	1.138	-0.607	-0.363	-1.206	0.518	-0.896	0.862	-0.768	0.237	0.538	0.625
Nigeria	0.042	0.616	-1.068	-0.853	-0.177	1.123	-0.707	0.325	-0.455	0.181	0.533	0.523
Yemen	-0.205	2.300	0.585	-1.019	-1.615	-0.148	-1.357	1.130	-0.904	0.076	0.074	0.673
Azerbaijan	-0.301	2.801	-0.338	0.331	0.231	-0.627	0.007	-0.814	-0.597	-0.808	-0.286	-0.201
Kazakhstan	-0.367	-0.669	0.948	0.254	0.697	-0.458	-0.025	-0.704	-0.074	-0.143	0.007	-0.201
Kuwait	-0.840	-0.423	-0.956	-0.264	0.223	0.861	-0.730	0.199	-0.945	0.521	0.215	0.461
Peru	-0.931	-1.640	-0.185	0.980	-0.990	-0.359	0.198	0.416	0.789	-0.285	-0.333	0.480
Mexico	-0.947	-3.110	-0.442	1.012	-0.796	0.656	-0.037	0.538	0.691	-0.235	0.285	0.491
Kyrgyzstan	-0.958	-1.065	-0.963	0.594	0.499	0.070	-0.269	0.016	-0.082	0.332	-0.242	0.151
Pakistan	-1.223	1.273	0.302	0.654	-1.108	0.613	-1.738	-0.149	-0.697	-0.233	-0.349	0.209
Singapore	-1.482	-0.266	-1.019	-1.241	1.140	0.267	0.195	-0.383	0.088	-0.057	0.036	-0.241
Hong Kong	-1.876	-2.016	0.031	0.181	0.643	-0.467	0.807	-0.351	0.122	-0.211	-0.268	-0.345
Belarus	-2.711	-0.558	-0.006	0.536	-0.023	-1.414	0.551	-0.361	-0.098	-0.363	-0.319	-0.657
Palestine OT	-2.997	0.724	-1.245	-0.618	-0.962	-0.611	-0.736	0.589	-0.726	0.144	0.065	0.381
Ukraine	-3.060	-0.630	1.269	0.733	-0.653	-1.526	-0.159	-0.730	0.104	-0.465	-0.203	-0.799
Iraq	-3.306	1.105	-0.373	-0.728	-0.794	-0.934	-1.119	0.543	-0.727	-0.204	-0.134	0.061
Egypt	-3.878	1.458	0.809	-1.111	-1.273	-3.046	-1.525	0.836	-0.644	0.569	0.027	0.022
Algeria	-4.422	-2.077	-0.133	-0.866	-0.705	-0.202	-0.413	0.261	-0.691	-0.139	0.069	0.474
Bahrain	-4.426	0.912	-3.032	-0.221	0.989	-0.143	0.405	-1.580	-0.868	0.655	-1.284	-0.258
Russia	-4.609	-1.455	0.750	0.676	-0.658	-1.301	0.188	-0.804	-0.159	-0.515	-0.416	-0.916
Lebanon	-5.183	-1.664	-1.416	-0.551	-1.107	-0.171	0.111	-0.172	-0.211	0.216	-0.169	-0.048
Philippines	-5.774	-4.228	-0.695	-1.229	0.965	0.182	-1.184	0.109	-0.198	0.506	-0.344	0.341
South Africa	-9.691	-5.075	-0.757	-2.445	0.186	0.438	-0.961	-0.826	-0.137	0.158	-0.188	-0.084
India	-10.498	-4.656	-2.702	-1.989	0.798	0.404	-0.093	-0.489	-0.759	0.283	-0.940	-0.354

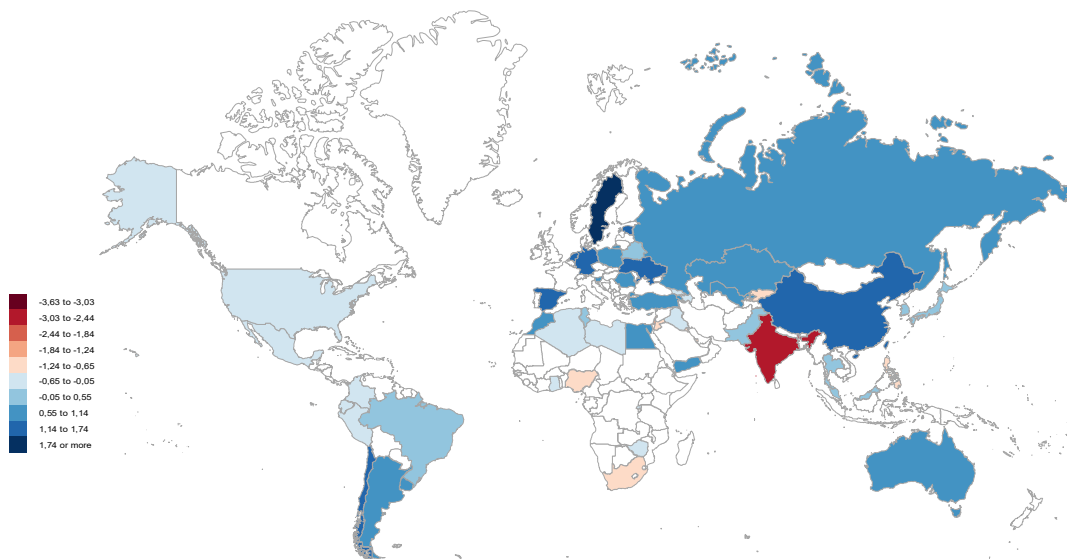
Appendix Map 1: The non-violent and law-abiding society



source: our own calculations and <http://www.clearlyandsimply.com/>

Best: Azerbaijan; Georgia; Jordan; Yemen; Tunisia
Worst: South Africa; India; Philippines; Mexico; Algeria

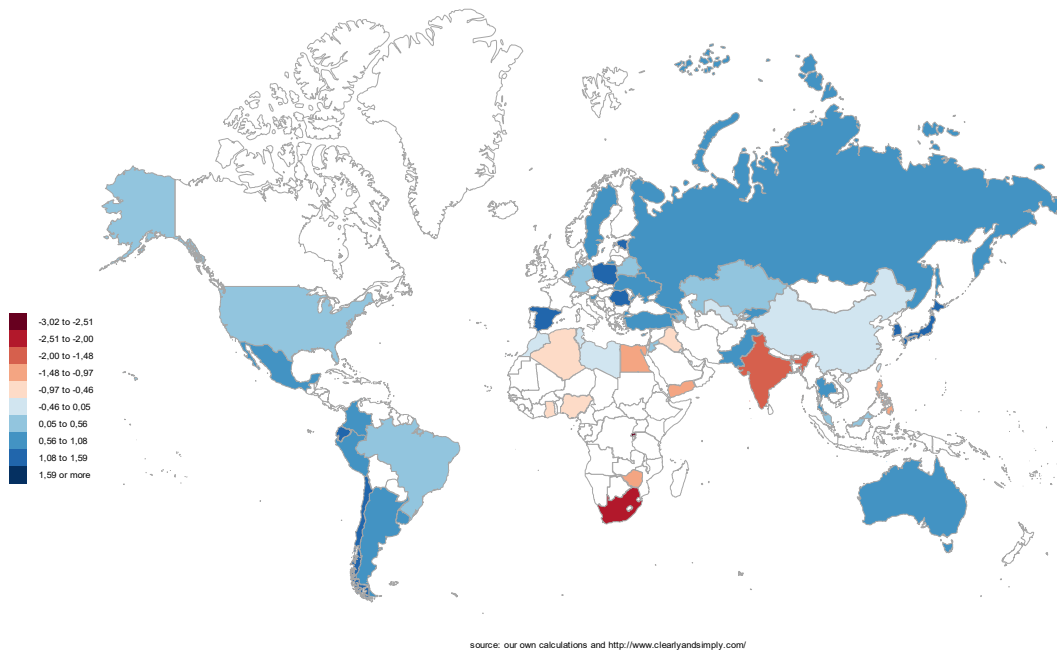
Appendix Map 2: Democracy movement



source: our own calculations and <http://www.clearlyandsimply.com/>

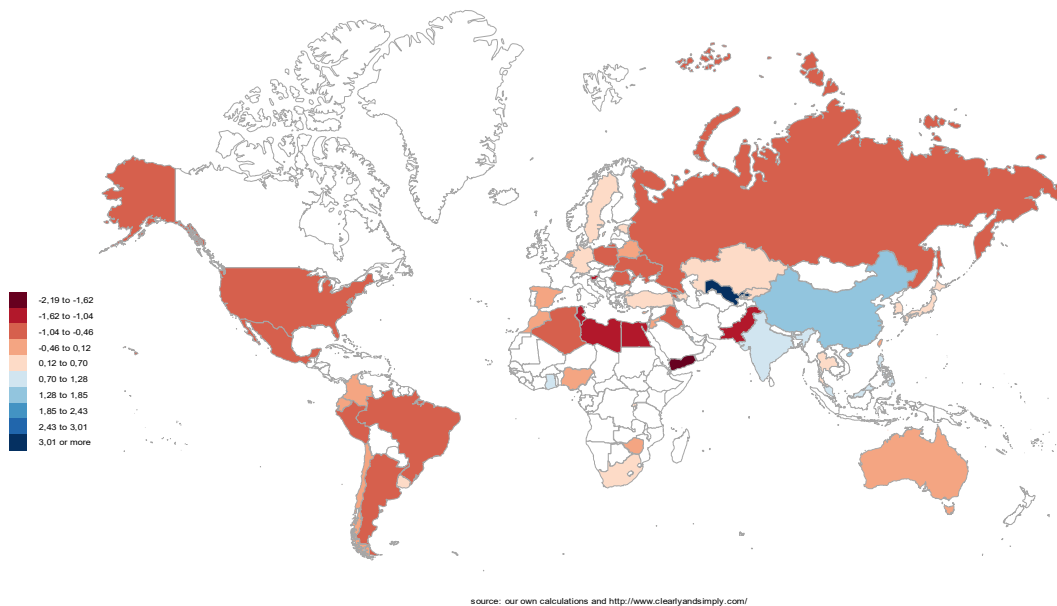
Best: Sweden; Taiwan; Germany; Spain; Estonia
Worst: Bahrain; India; Lebanon; Palestinian Occupied Territories; Qatar

Appendix Map 3: Climate of personal non-violence



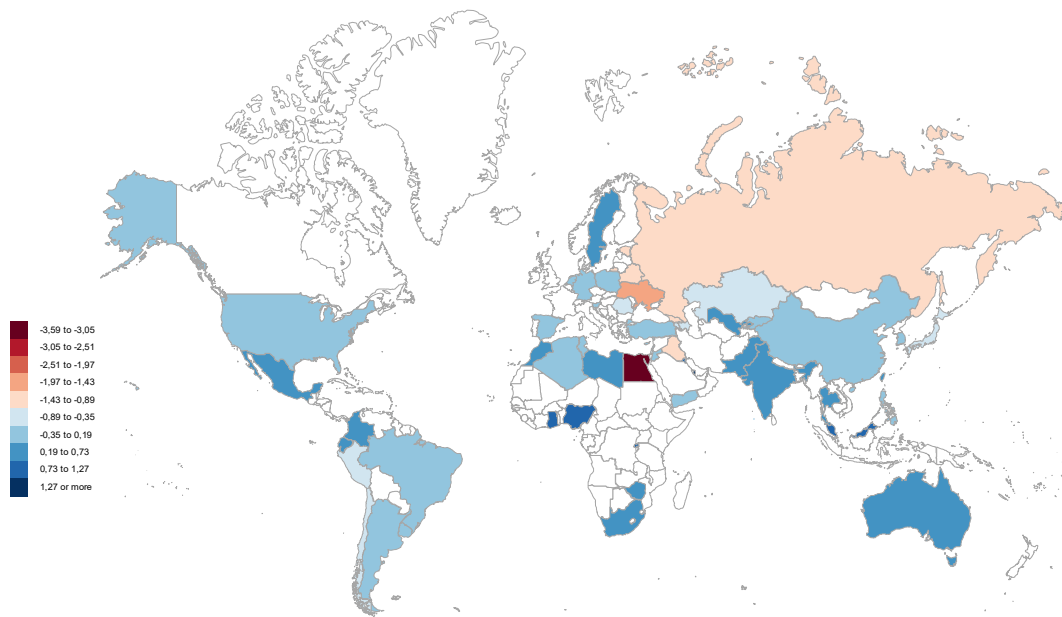
Best: Chile; Japan; Korea, South; Spain; Ecuador
Worst: Rwanda; South Africa; India; Singapore; Philippines

Appendix Map 4: Trust in institutions



Best: Uzbekistan; Qatar; China; Singapore; Malaysia
Worst: Yemen; Tunisia; Egypt; Libya; Pakistan

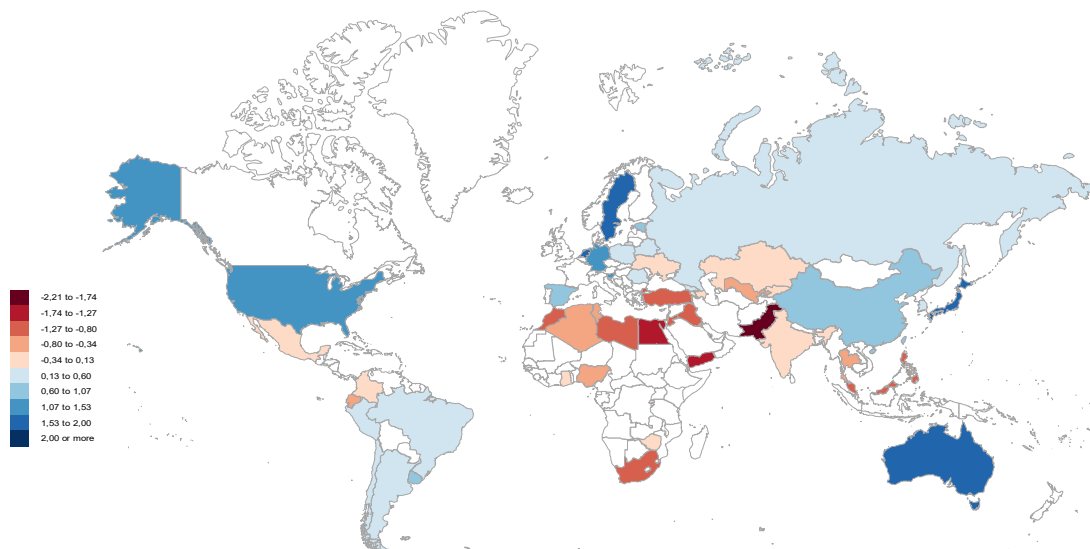
Appendix Map 5: Happiness, good health



source: our own calculations and <http://www.clearlyandsimply.com/>

Best: Qatar; Nigeria; Ghana; Rwanda; Kuwait
Worst: Egypt; Ukraine; Belarus; Russia; Georgia

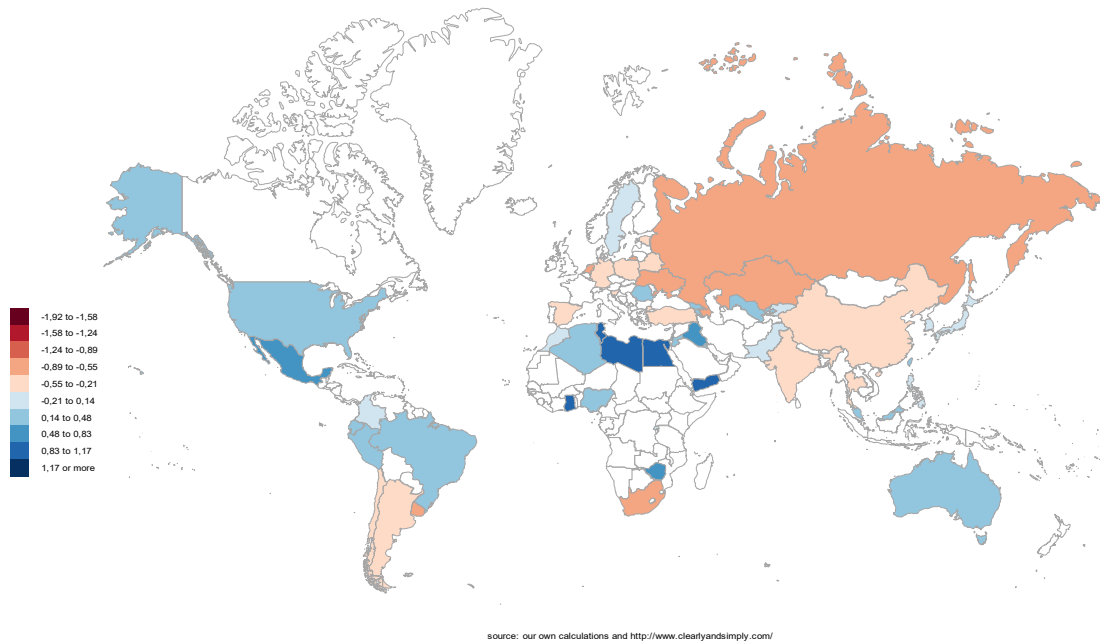
Appendix Map 6: no redistributive religious fundamentalism



source: our own calculations and <http://www.clearlyandsimply.com/>

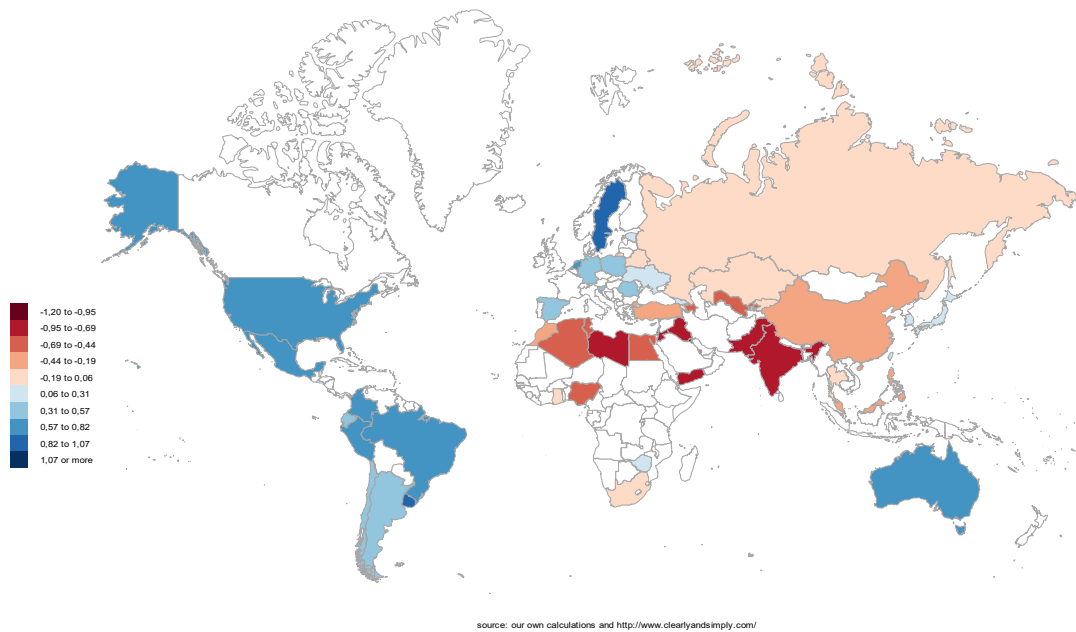
Best: Sweden; Netherlands; Australia; Japan; Germany
Worst: Pakistan; Egypt; Yemen; Philippines; Qatar

Appendix Map 7: Accepting the market economy



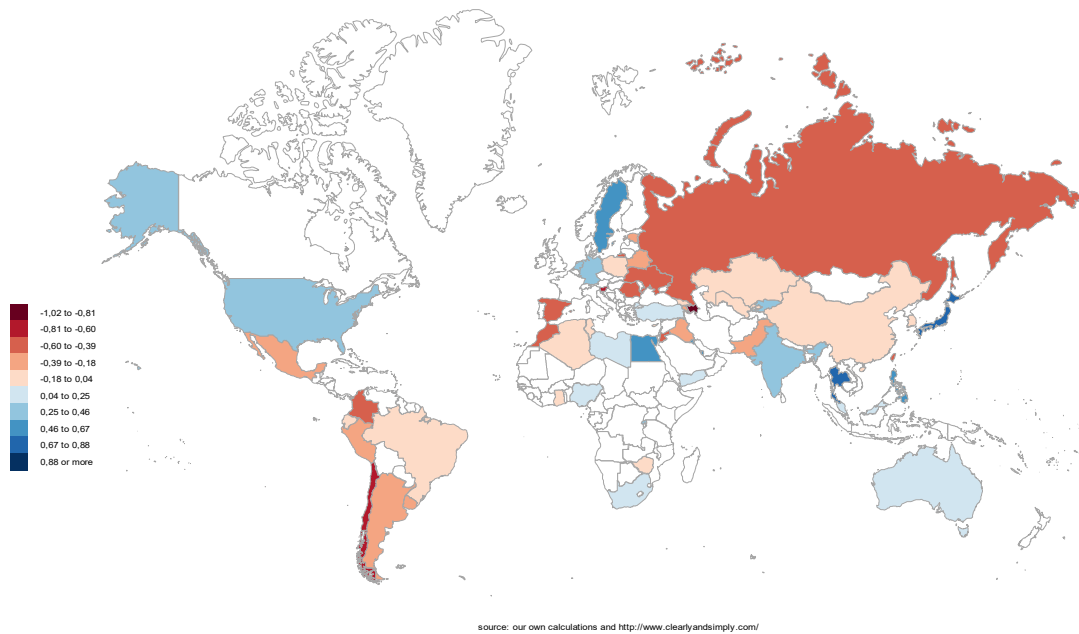
Best: Trinidad and Tobago; Yemen; Ghana; Tunisia; Libya
Worst: Bahrain; South Africa; Azerbaijan; Russia; Ukraine

Appendix Map 8: Feminism



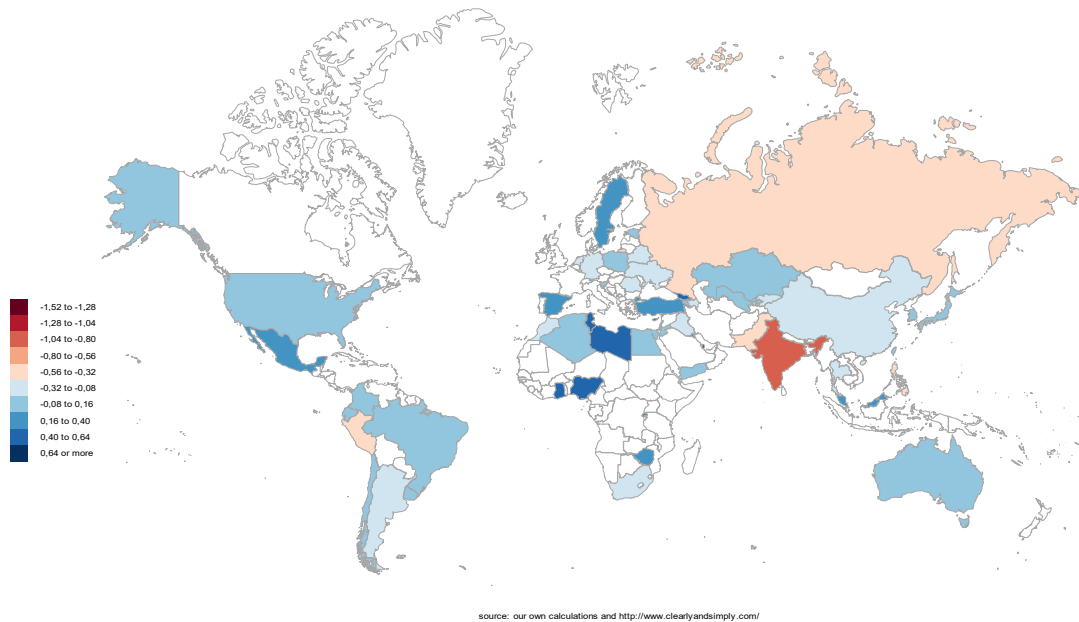
Best: Trinidad and Tobago; Sweden; Uruguay; Peru; Colombia
Worst: Kuwait; Yemen; Bahrain; Jordan; Libya

Appendix Map 9: Involvement in politics



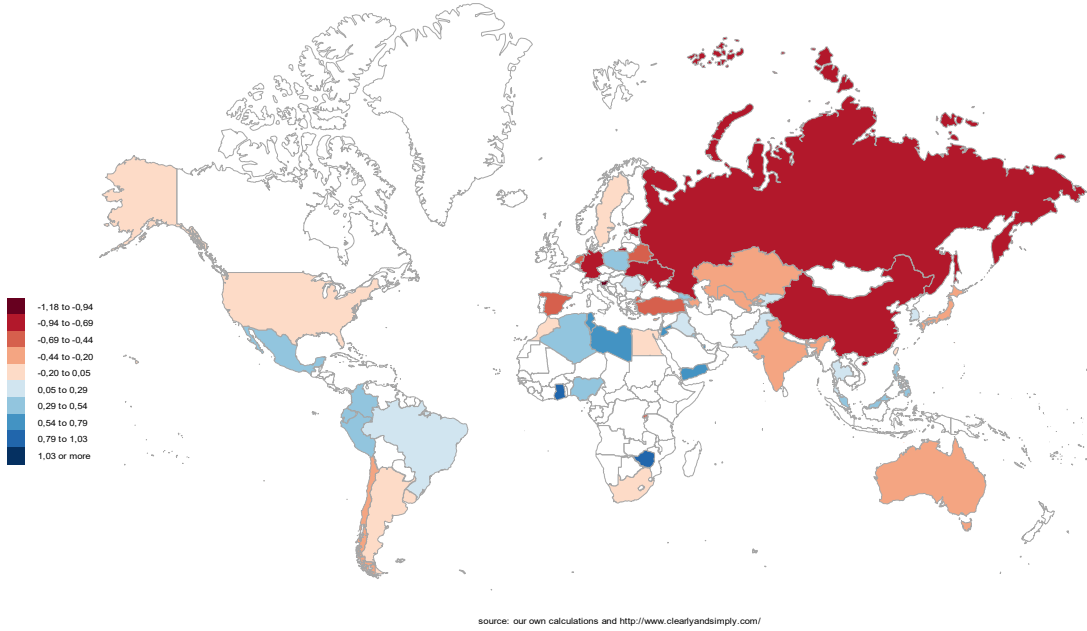
Best: Thailand; Japan; Bahrain; Egypt; Kuwait
Worst: Azerbaijan; Chile; Slovenia; Spain; Colombia

Appendix Map 10: Optimism and engagement



Best: Qatar; Libya; Nigeria; Georgia; Cyprus
Worst: Bahrain; India; Russia; Pakistan; Philippines

Appendix Map 11: No welfare mentality, acceptance of the Calvinist work ethics



Best: Ghana; Trinidad and Tobago; Zimbabwe; Qatar; Yemen
Worst: Slovenia; Russia; China; Germany; Ukraine