

IZA DP No. 4459

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Re-Interpreting Value Change in Globalized Societies

Arno Tausch
Almas Heshmati

September 2009

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Arno Tausch
Innsbruck University

Almas Heshmati
*Seoul National University
and IZA*

Discussion Paper No. 4459
September 2009

IZA

P.O. Box 7240
53072 Bonn
Germany

Phone: +49-228-3894-0
Fax: +49-228-3894-180
E-mail: iza@iza.org

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ABSTRACT

***Asabiyya:* Re-Interpreting Value Change in Globalized Societies**

This article reflects the renewed interest of economics and the social science discipline in value systems and religion. The *World Values Survey* provided a data framework of global value change, whose quantitative results led Barro (2004) to analyze the connections between some dimensions of recent sociological religious value research with economic growth. The present essay starts from this methodological position, and links value systems with economic performance in a much wider and macrosociological framework. We further develop the well-known Inglehart and Welzel (2003) map of global values, and develop the idea of "*Asabiyya*" ("social cohesion"), as a counter-model to both Barro and Inglehart and Welzel approaches. A frequently asked question is whether "modernization" without "spiritual values" in a globalized world economy and world society possible in the long run? Starting from principal component analysis, it is shown that rather two factors are decisive in understanding global value change: a continuum of "*traditional versus secular*", and a continuum "*cheating versus active society*". *Asabiyya* in the 21st Century, as a way out from the modernization trap of societies, characterized by large-scale social anomaly, is a high secularism combined with a high active society score, thus avoiding the "modernization trap". We show that economic growth in the current world crisis is far more connected with these dimensions. We conclude that not a society based on fear is needed in the first place, but an active society of volunteer social work.

JEL Classification: C43, F5, Z12, D73

Keywords: index numbers and aggregation, international political economy, religion, bureaucracy, corruption

Corresponding author:

Almas Heshmati
TEMEP #37-306, College of Engineering
Seoul National University
San 56-1, Shilim-dong, Kwanak-Gu
Seoul, 151-742
South Korea
E-mail: heshmati@snu.ac.kr

1. Introduction

This article reflects the renewed interest of economics and the social science disciplines in general in value systems and religion. Barro (2004), Barro and McCleary (2004) already paved the way for such an analysis by showing the connections between some dimensions of recent sociological religious value research with economic growth.

The *World Values Survey* provided a data framework of global value change, whose quantitative results led members of the economic profession, most notably, Barro, 2004 to analyze the connections between some dimensions of recent sociological religious value research (like the strength of the belief in hell) with economic growth. The present essay starts from this methodological position, and, like Barro links value systems with economic performance. The belief in or the fear of hell is part and parcel of a larger set of traditional values. With the free available country-wide data from the *World Values Survey*, we re-interpret Barro's thesis in a much wider and macro-sociological framework. We further develop the well-known Inglehart and Welzel (2003) map of global values, and develop the idea of "*Asabiyya*" ("social cohesion"), inherent in classic Arab historiography, first described by Ibn Khaldun (1332 to 1406) in his work "*Muqaddimah*", as a counter-model to both Barro (20030 and Inglehart and Welzel (2003).

A frequently asked question is whether "modernization" without "spiritual values" in a globalized world economy and world society possible in the long run? Starting from our multivariate analysis of the *World Values Survey data* (principal component analysis), it is shown that rather two factors are decisive in understanding global value change: a continuum of "*traditional versus secular*", and a continuum "*cheating versus active society*". *Asabiyya* is defined then empirically by the residuals from the two factor scores. *Asabiyya* in the 21st Century, as a way out from the modernization trap of societies, characterized by large-scale social anomaly, is a high secularism combined with a high active society score, thus avoiding the "modernization trap" of an increasingly secular society, which accepts cheating on taxes; accepts government benefits fraud and taking bribes. This re-discovery of the "active society paradigm", inherent in Etzioni's sociological theory, for cross-national research on religion and economic growth also shows that the "active society" of volunteer organization work is the best societal medicine against this kind of value decay, which is so common, according to our study, in countries like France, Brazil, or most of East Central Europe and the former USSR.

An active form of religious or non-religious humanism, which provides a noble motivation for such activities as volunteer social services, is a very necessary precondition for social cohesion in the 21st Century. Finally, we show on the basis of these data and with very recent IMF data and prognoses (2009) about economic growth in the world system for 2009 and 2010 that economic growth in the current world crisis is far more connected with these dimensions than with the belief in hell, as stipulated by Barro. We also control for the negative effects of Kearney's globalization index on current and future economic growth in our equations. We conclude that not a society based on fear is needed in the first place, but an active society of volunteer social work.

Rest of this study is organized as follows. After presenting an overview of contemporary quantitative and comparative value research, "*Asabiyya*" is developed as a counter-model to both Barro and Inglehart/Welzel. Principal component analysis is used to

identity factors which are decisive in understanding global value change. Using IMF data and prognoses we investigate the connection between economic growth these dimensions. We also control for the negative effects of globalization index on current and future economic growth in our equations. Conclusions finalize the article.

2. Making use of the “World Values Survey” data

This study thus uses an array of quantitative methods to come to terms with global values, global value change and current economic depression or growth. To be sure, especially the contemporary debate about “Islam” in globalized society lacks the empirical, sociological data which urgently would be required to study “the realities on the ground”.¹ As we shall analyze in this article, economic growth with a vengeance currently shifts to non-western regions of the world economy, thus falsifying the pessimistic prognoses by Huntington (1996) on the incompatibility of Muslim culture with economic growth.

But a silent and behavioural revolution and quantitative indicator research are beginning to be firmly established in the evolving debate about “global values”. Robert Barro², Ronald T. Inglehart³, Jytte Klausen⁴, Dalia Mogahed⁵, Mansoor Moaddel⁶, Marcus Noland⁷, Pippa Norris⁸, and Thorleif Pettersson⁹ introduced the necessary

¹ For a selection of related studies see: Abdullah and Khoury, 1984; Amin, 1989; Armstrong 1993, 2000, 2006; Aydin 2003; Balic, 2001; Bardakoglu, 2006; Berger, 2001; Boff, 2005; Bsteh 1996; Bsteh and Anawati, 1978; Bsteh and Dupré, 2007; Bsteh and Khoury, 1994; Erdenir 2006; Huntington, 1996; Khoury 1980, 1991, 1994, 2001, 2002, 2005, 2007a, 2007b, 2008a, 2008b; Khoury et al., 2006; Lewis, 1993, 2002, 2003; Tibi B., 1973, 1981, 1985, 1990, 1992a, 1992b, 1995, 1996, 1997, 1997a, 1997b, 1998a, 1998b, 2000, 2001a, 2001b, 2001b, 2002, 2007; Troll 1978, 2001a, 2001b, 2003, 2004, 2007; Troll and Bsteh, 1997; Troll and Donohue, 1998; Troll and Vahiduddin, 1986.

² *Religion and economic growth* / (together Rachel M McCleary), Cambridge, Mass.: National Bureau of Economic Research, 2003.

³ *Islam, gender, culture, and democracy: findings from the World Values Survey and the European Values Survey* / Willowdale, ON: De Sitter Publications, 2002, and *Islam & the West: testing the clash of civilizations thesis* / (gemeinsam mit Pippa Norris), Cambridge, Mass.: Research Programs, John F. Kennedy School of Government, Harvard University, 2002.

⁴ *The Islamic challenge: politics and religion in Western Europe* / New York, N.Y.: Oxford University Press, 2005; *Continuity and change in contemporary capitalism* / Cambridge, UK; New York, NY: Cambridge University Press, 1999; *War and welfare: Europe and the United States, 1945 to the present* / New York: St. Martin's Press, 1998; *European integration in social and historical perspective: 1850 to the present* / Lanham, Md.: Rowman & Littlefield Publishers, 1997; *Has liberalism failed women?: assuring equal representation in Europe and the United States* / New York, N.Y.: PALGRAVE, 2001

⁵ *Who Speaks for Islam?: What a Billion Muslims Really Think*. By John L. Esposito, Dalia Mogahed, March 2008, New York: Gallup Press.

⁶ *Class, politics, and ideology in the Iranian revolution* / Columbia University Press, 1993; *The Oxford handbook of global religions* / (with Juergensmeyer, Mark) Oxford; New York: Oxford University Press, 2006; *Modernist and fundamentalist debates in Islam: a reader* / New York: Palgrave Macmillan, 2002, 2000; *Islamic modernism, nationalism, and fundamentalism: episode and discourse* / Chicago: University of Chicago Press, 2005; *Jordanian exceptionalism: a comparative analysis of state-religion relationships in Egypt, Iran, Jordan, and Syria* / Houndmills, Basingstoke, Hampshire; New York: Palgrave, 2002; *Values and perceptions of the Islamic and Middle Eastern publics* / New York: Palgrave Macmillan, 2007

⁷ *The Arab economies in a changing world* / (with Howard Pack), Washington, DC: Peterson Institute for International Economics, 2007.

⁸ *Sacred and secular: religion and politics worldwide* / Pippa Norris; Ronald Inglehart; Cambridge, UK; New York: Cambridge University Press, 2004.

⁹ *Measuring and mapping cultures: 25 years of comparative value surveys* / Leiden; Boston: Brill, 2007; *The retention of religious experiences* / Uppsala: [Univ.]; Stockholm: distr., Almqvist & Wiksell international, 1975 und *Scandinavian values: religion and morality in the Nordic countries* / Uppsala: S. Academiae Ubsaliensis; Stockholm: Distributor, Almqvist & Wiksell International, 1994. Also, his path-breaking article “The Religious Factor in Contemporary Society: The Differential Impact of Religion on the Private and Public Sphere in

empirical elements into a value-loaded debate, otherwise still often characterized by such terms as “leading culture” or “guiding culture”, especially in Europe. Professor Bassam Tibi, one of the most important authorities on Islam, world-wide, said in an interview with *Der Spiegel*:

“I have always emphasized how dangerous it is to talk about a specifically German Leitkultur. [...] The important thing is: the line doesn't run between Europe and Islam, but between all open societies and their enemies. I myself am Muslim and I stand on the side of an open society. Democratic Muslims like myself can push for a European Leitkultur and against its enemies. [...] My idea of a European Leitkultur is based on the foundation of a democratic community whose members are bound together through a collective identity as citizens of that community. Such a collective identity -- in the sense of the French Citoyenite (citizenship) -- stands above religious identity. Religion may, of course, be practiced privately, but in public only citizenship counts. Such a concept would unite Muslims with non-Muslims. [...] In my understanding [...] multiculturalism means "anything goes." [...] The better concept would be cultural pluralism. Unlike multiculturalism, cultural pluralism doesn't just mean diversity but also togetherness -- primarily the understanding of the rules of the game -- the European values structure.
(<http://www.spiegel.de/international/0,1518,329784,00.html>)

Certainly, there was also a recent upsurge of research on such phenomena as Muslim values, and the relationship of Muslim values to economic growth and the structures of international inequality.¹⁰ The World Values Survey data, freely available on the Internet (<http://www.worldvaluessurvey.org/>), now focus on over 80 countries, covering almost 90% of global population. The sociological and political science approach, underlying the project, asks global respondents since the mid-1980s the same kind of questions, like:

Qualities that children can be encouraged to learn at home

- Important child qualities: good manners(A027)
- Important child qualities: independence(A029)
- Important child qualities: hard work(A030)
- Important child qualities: feeling of responsibility(A032)
- Important child qualities: imagination(A034)
- Important child qualities: tolerance and respect for other people(A035)
- Important child qualities: thrift saving money and things(A038)
- Important child qualities: determination perseverance(A039)
- Important child qualities: religious faith(A040)
- Important child qualities: unselfishness(A041)
- Important child qualities: obedience(A042)

The hundreds of questions, available to users of the WVS website, are grouped into the following nine categories, and also form the empirical basis for this article. The survey

Comparative Perspective” (together with Halman, Loek; and Verweij, Johan) in *International journal of comparative sociology*. 40, no. 1, (1999): 141ff. has to be duly mentioned here

¹⁰ See *BM.I.SIAK*, 2006; *Diez-Nicolás*, 2007; *Dittrich*, 2006; *Donno and Russett*, 2004; *HUDSON Institute*, 2006; *Inglehart* 2007; *Inglehart and Norris*, 2003; *Jabber*, 2001; *Noland*, 2004; 2005; *Noland and Pack*, 2004; *Norris and Inglehart*, 2004; *Pettersson* 2007; *PEW Research Center*, 2006; *RAND Corporation*, 2005, 2006; *Savage*, 2004; *Weede*, 2006.

cover the time periods 1981-1984, 1989-1993, 1994-1999, and 1999-2004 (the so-called “waves” of the *World Values Survey*):

1. Structure
2. Perceptions of life
3. Environment
4. Work
5. Family
6. Politics and Society
7. Religion and Morale
8. National Identity
9. Sociodemographics

3. Index construction

The cross-national opinion data from the World Values Survey render themselves for further analytical index construction. Recently, social science research took up again the question of complex indicator formation (Heshmati, 2006; Heshmati and Oh, 2006, Heshmati, Tausch and Bajalan, 2008). This work was first developed in the field of human development, globalization indices, child welfare indices and European Union Lisbon agenda or Lisbon process indices. Outcomes and opinion structures are often multidimensional and represented by several indicators with both positive and negative effects. However, here the objective is not to evaluate the effects of certain policy programs, but rather to quantify the state of the outcome or opinion structures. The multidimensionality of the outcome or opinion structures requires the creation of composite indices to have a single measure and also to aggregate the indicators. On the basis of the “*World Values Survey*” data, which are multidimensional and decomposable, such indices will be useful tools in the quantification of the state of global opinion and values and the evaluation of their impacts on development. In this section, we introduce two approaches –non-parametric and parametric indices, - used here in the construction of such indices, based on the *World Values Survey*.

Non-parametric index

A non-parametric index is a composite index constructed such as to aggregate a number of indicators of a certain process, opinion structure or outcome. Such indices are used in the social science literature for the measurement of globalization (Heshmati, 2006; Andersen and Herbertsson, 2003; Kearney, 2002 and 2003; Lockwood, 2004;), environment (Kang, 2002), human development (Noorbakhsh, 1998), development strategy, technology and research (Heshmati and Oh, 2006; Archibugi and Coco, 2004), or other types of indices (Inglehart, 1990; Inglehart and Norris, 2003; Norris and Inglehart, 2004). For instance, the well-known “globalization index” is a simple combination of forces driving the integration of ideas, people, and economies, worldwide. It is composed of four major components: economic integration, personal contact, internet technology, and political engagement, each being generated from a number of determinant variables. Such an index can also serve as a model for the computation of a volunteer index or other indices – as the ones developed in this article - on the basis of the “*World Values Survey*” data.

In the recently debated case of child well-being (Heshmati, Tausch and Bajalan, 2008), the index was composed of six components: material well-being, health and safety, educational well-being, peers and family relationships, behaviours and risk, and social well-being. The CWI – child-well-being index - was then estimated parametrically or computed non-parametrically based on the normalization of the child well-being indicators and their subsequent aggregation, using an ad hoc weighting system as follows:

$$(1) \quad CWI_t = \sum_{j=1}^J \sum_{m=1}^M \omega_{jm} \{ (X_{jmi} - X_{jm}^{\min}) / (X_{jm}^{\max} - X_{jm}^{\min}) \}$$

where i and indicate country; m and j are within and between component variables; ω_{jm} are the weights attached to each contributing X -variable within a component and weights attached to each of the six components; and min and max are minimum and maximum values of respective variables across countries in a given year. Such indices are similar to the commonly-used index, the United Nations Human Development Index (HDI), which is based on educational attainment, life expectancy and real GDP per capita.¹¹

An index of type (1) is suitable for indicators with an expected positive effect on *World Values Survey* aggregates, constructed from WVS data. In cases where the indicators are expected to have a negative impact on WVS aggregate indices, the corresponding index is written as:

$$(2) \quad CWI_i = \sum_{j=1}^J \sum_{m=1}^M \omega_{jm} \{ (X_{jm}^{\max} - X_{jmi}) / (X_{jm}^{\max} - X_{jm}^{\min}) \}$$

where the two indices differ only by the nominator of the ratio. Alternatively, prior to the normalization in (1) and aggregation, the negative indicators are transformed to inverses, $(1/X)$ reversing their expected impact from negative to positive.

The index component's weights in equations (1) and (2) are chosen on an ad hoc basis and are constant across countries. However, this non-parametric index can be also used as a benchmark index. Lockwood (2004), in computation of a globalization index, finds the ranking of countries to be sensitive to the way the indicators are measured, normalized and weighted.

Parametric index

There are at least two other alternatives, but parametric approaches to the non-parametric index above for computing opinion indices or behaviour indices; using the principal component (PC) or factor analysis (FA) approach (for recent applications see Andersen and Herbertsson, 2003).¹² In this study we adopt the PC approach. Since the two methods in normalized form give PC scores with unit variance, we use only the PC results in the analysis of *World Values Survey* indicators. It is used to measure global

¹¹ For a review of the HDI, its components, criticisms on the index, alternative measures and suggestions for some improvements of the index, see Noorbakhsh (1998).

¹² For recent surveys on the literature on the use of composite indices in different development research context, see also Archibugi and Coco (2004).

values and attribute it to the possible underlying sources of global values. PC analysis was originated by Pearson (1901) and further developed by Hotelling (1933).

Principal component analysis is a multivariate technique for examining relationships within a set of interrelated quantitative variables. Given a dataset with J numeric indicators, at most P principal components can be computed; each is a linear combination of the original indicators with coefficients equal to the eigenvectors of the correlation of the covariance matrix. The principal components are sorted according to the descending order of the Eigenvalues, which are equal to the variance of the components. In short, PC analysis can be viewed as a way to uncover approximate linear dependencies among variables. This method gives a least square solution to the following model:

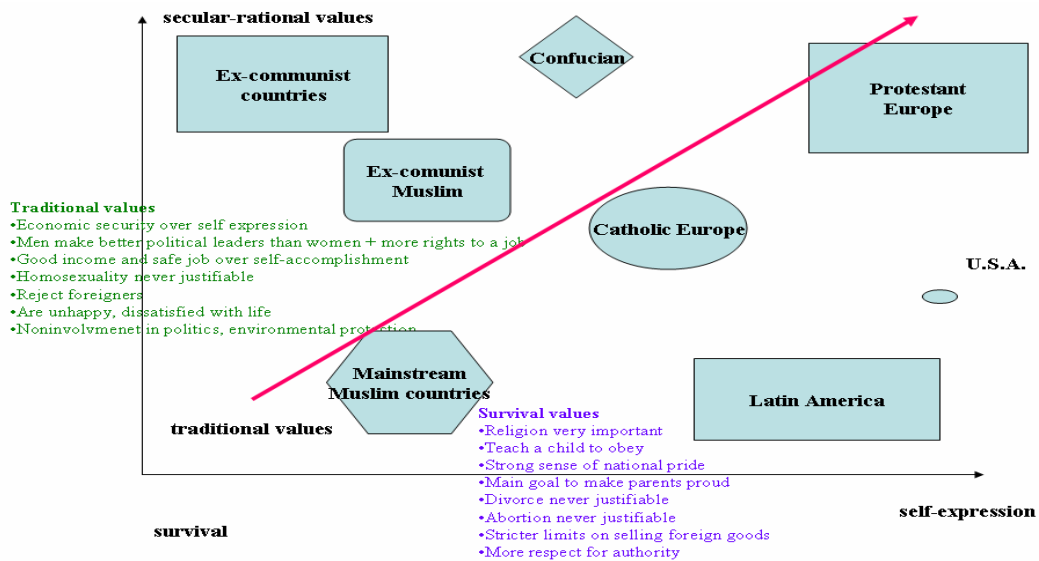
$$(3) \quad Y = XB + E$$

where Y is a $n \times p$ matrix of the centred observed variables, X is the $n \times j$ matrix of scores of the first j principal components, B is a $j \times p$ matrix of eigenvectors or factor patterns, E is a $n \times p$ matrix of residuals, n is the number of observations, p the number of partial variables, and j the number of variables or indicators of strategy. Unlike in a traditional least squares estimation method case, where the vertical distance to the fitted line is minimized, here the sum of the squared residuals measured as distances from the point to the first principal axis.

4. The Inglehart worldview

Inglehart/Welzel, 2003, came up with the up to now most plausible and also empirically well founded scheme of global value development and measurement. The transition of countries from traditional to modern societies grouped by combination of scales of self expression and survival and secular-rational and traditional values according to Inglehart is reported in Graph 1:

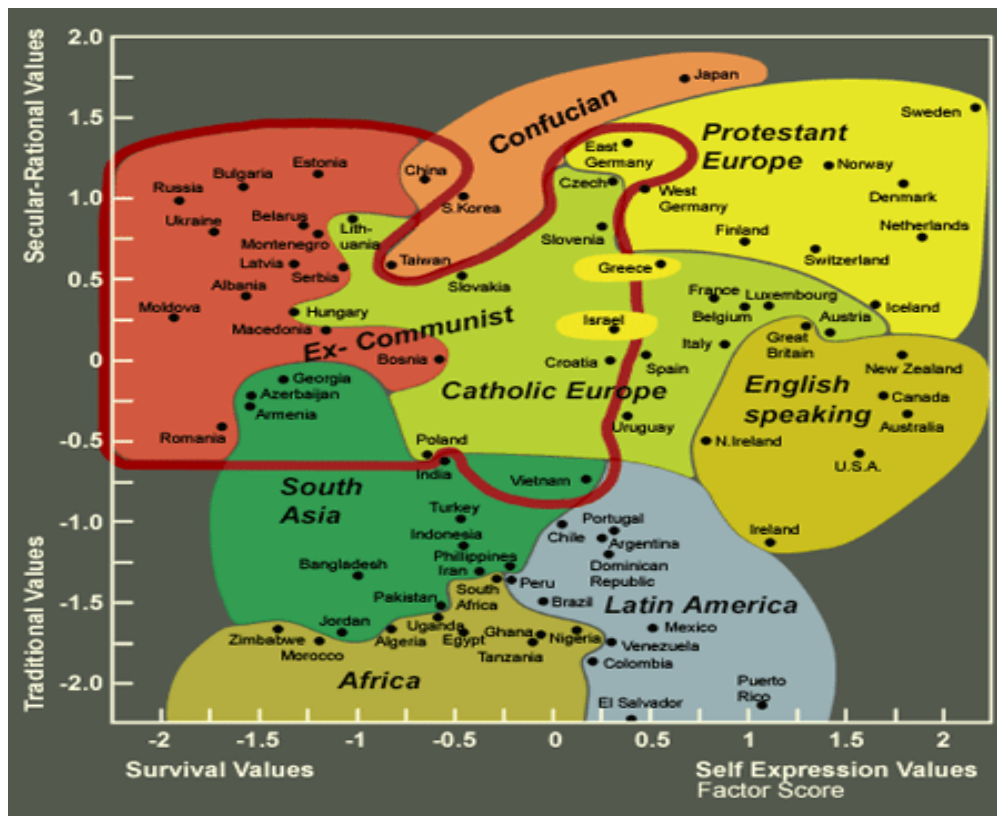
Graph 1: The transition from traditional to modern societies, according to Inglehart



Note: our own compilations on the basis of Inglehart/Welzel, 2003. Inglehart/Welzel factor-analyzed the WVS-country results for the variables: *Abortion never justifiable*; *Divorce never justifiable*; *Main goal to make parents proud*; *More respect for authority*; *Religion very important*; *Stricter limits on selling foreign goods*; *Strong sense of national pride*; *Teach a child to obey* and drew the conclusion that the resulting principal component represents *survival versus self expression*. Likewise, he factor-analyzed the country results for the WVS variables: *Are unhappy, dissatisfied with life*; *Economic security over self expression*; *Good income and safe job over self-accomplishment*; *Homosexuality never justifiable*; *Men make better political leaders than women + more rights to a job*; *Non-involvement in politics, environmental protection*; *Reject foreigners* and drew the conclusion that this dimension represents the “*traditional versus secular*”.

One of the most famous pieces of Inglehart’s research tradition is the Inglehart/Welzel, 2003 world map of human values, which depicts the trajectory of all the countries of the world both over space and time. Starting from the left-hand lower corner, a society, as a rule, will move to the upper right hand corner of Graph 2. This sociological “law”, which was obtained by the statistical mathematical model of principal component analysis, based on the WVS data, must be regarded as one of the most solidly based observations of sociological theory today.

Graph 2: The Inglehart-Welzel, 2003 map of global values



Source: <http://www.worldvaluessurvey.org/>

Note: based on Inglehart/Welzel. The authors would assume that societies do move along the global path, symbolized by the arrow, from a traditional and survival oriented value set towards a secular and self-expression oriented value set.

5. The Ibn Khaldoun counter-model

But what can we say about the outliers? The classic Arab historian and philosopher Ibn Khaldun (1332-1406) (Ibn Khaldun, 2005), explained in his most important book “*Muqaddimah*” (*Introduction to history*) [see also Tibi, 1996] that historical change and the succession of dynasties are a function of the interactions between nomadic culture and urban civilization.

His major contribution in this context then consisted in the analysis of the correlation between ‘*Asabiyya*’, the social cohesion of a society, and political power. He argued that the strong social cohesion of tribal peoples enabled them to conquer urbanized regions and build regimes and civilizations, but that these conquests were undone by the tribes' gradual loss of ‘*Asabiyya*’ in the urban setting, leading to new conquests by tribal peoples still strong in desert cohesiveness. Although power was the basis of rulership and royal authority was established through military might, the “glue” that held societies together (Tibi, 1996) was ‘*Asabiyya*’, based on kinship and religion and stronger in tribal than in urban society. Conquerors, whose social cohesion was weak were soon overcome by the civilization of the conquered and gave way to a new conquering group. Rulers would be successful only so long as they remained just; as the rulers' level of luxury increased, so did their level of exploitation, and injustice soon produced division and “the ruin of civilization” (Tibi 1996). Ibn Khaldun also foresaw the tendency towards economic cycles, which he linked, quite in a modern fashion, to this “value change” (Inglehart/Norris, 2003; Norris/Inglehart, 2004).

Contemporary quantitative Kondratiev cycle researchers, like Rennstich, 2007, stumbled onto the issue again, without duly taking into account the theoretical forerunner Ibn Khaldun and linking the four generation cycle to the Nobel-laureate winning four generation family saga “*Buddenbrooks. The Decline of a family*” by the German novelist Thomas Mann (Mann, 1924), and calling the four-generation cycle the *Buddenbrooks cycle*. According to the *Buddenbrooks cycle* school the novel by Thomas Mann contains a dire and general message for societal systems and is a model of analysis, also to be applied to the contemporary, post-World-War II world order. Independently of Rennstich, Devezas/Corredine, already in 2001, developed a similar and mathematical model, also based on the four-generation “model”. Schumpeter, in his rather conservative and pessimistic interpretation, also touched upon this issue in his 1950 “*Capitalism, Socialism and Democracy*”, when he stated that capitalism will not disappear from the face of the earth by a socialist revolution, but by the gradual erosion of capitalist individual family values and the rise of a socialist-oriented intellectual elite and bureaucracy.

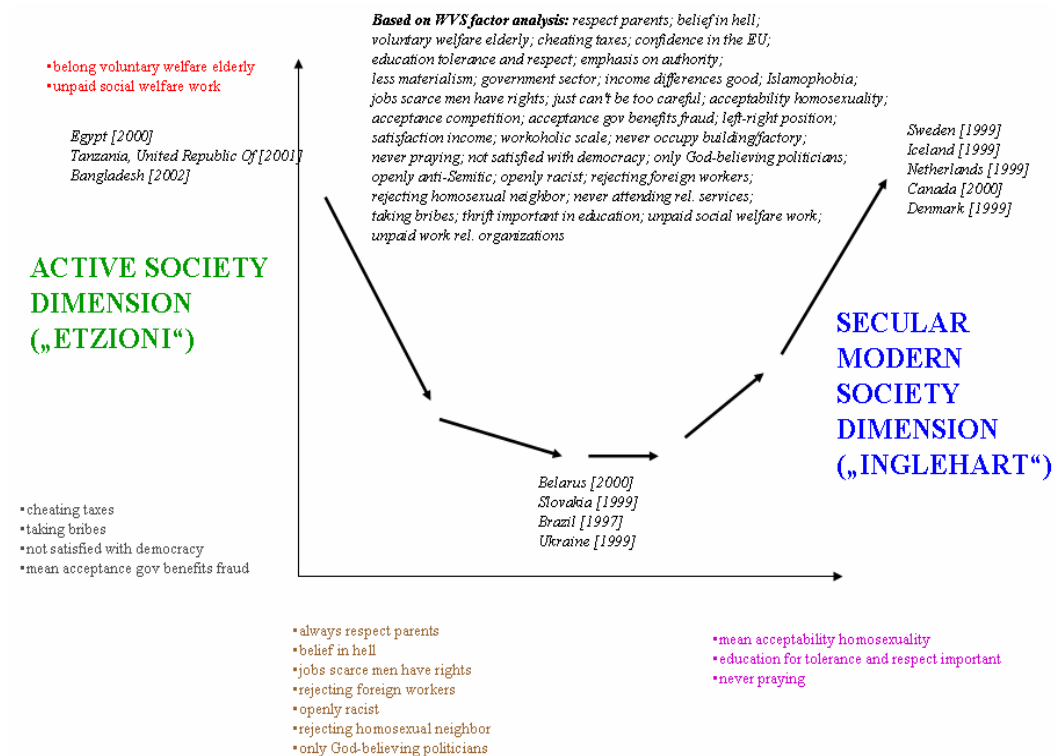
In terms of modern social science theory, the following Khaldounian scheme can be proposed. Societies do not generally experience a smooth transformation from a traditional and survival oriented value set towards a secular and self-expression oriented value set. The “*Asabiyya*” based counter-model to Inglehart relies on a factor analytical evaluation of the following variables in the *World Values Survey*, and combines theoretical insights of the Inglehart School with those by Amitai Etzioni.

At the very beginning of the modernization process, societies are traditional, religious, and pre-modern; but at the same time they are also “active” societies with functioning neighbourhood structures, and very clear perceptions of what are “good” and “evil”, and a high respect of the law. As the modernization process proceeds, traditional

religious values seem to be on the losing side of the societal equation. The uneasiness of the “religious right” in the United States, of the Islamist camp in many countries of the Muslim world, and the religious right in many developing countries is best understood by the process, whereby traditional values get lost at the same time with dimensions of the active society and respect of the law in such vital areas as tax morale, non-acceptability of bribery and government benefits fraud.

Islamists are of course wrong in assuming that countries of the Muslim world are the only ones to suffer from a downward trend in public morale. The worst global performers according to our data based on the Inglehart/Etzioni synthesis shown in Graph 3, it seems, are Belarus, Brazil, Slovakia, and the Ukraine. As churches and religious temples of all denominations are empty in the West and the Orthodox East, so are the volunteer organizations; and since “God” does not “exist”, everything becomes feasible, acceptable, and even becomes practice: cheating taxes, taking bribes, receiving government benefits even if you are not entitled for them:

Graph 3: The Inglehart/Etzioni synthesis



Note: our own calculations and compilations, based on the World Values Survey data, wave 3 + 4. The following WVS country values were submitted to an explorative principal component analysis: always respect parents; belief in hell; cheating taxes; education for tolerance and respect important; jobs scarce men have rights; mean acceptability homosexuality; mean acceptance government benefits fraud; never praying; not satisfied with democracy; only God-believing politicians; openly racist; rejecting foreign workers; rejecting homosexual neighbour, belong voluntary welfare elderly; taking bribes; unpaid social welfare work. Our analysis yielded two factors: a continuum of “traditional versus secular”, and a continuum „cheating versus active society“.

6. Principal components results

A full list of the WVS variables is found in Appendix A and the data sources in Appendix B. Our parametric principal component analysis of the country values from the WVS is shown in Table 1. The detailed information about the factor loadings and score is found in Appendix C. The logic of global value change yields the following results:

Table 1: The logic of global value change – results from a principal component analysis of the WVS data

	traditional versus secular attitudes	cheating versus active society
Albania [2002]	0,98230	0,43260
Algeria [2002]	1,45209	-0,49094
Argentina [1999]	-0,44307	-0,05472
Armenia [1997]	0,77980	1,66401
Australia [1995]	-0,93678	-0,76537
Austria [1999]	-0,97091	-0,07798
Azerbaijan [1997]	0,61006	1,19167
Bangladesh [2002]	2,18350	-2,99290
Belarus [2000]	-0,21767	1,97288
Belgium [1999]	-1,23220	0,49300
Bosnia and Herzegovina [2001]	0,31595	0,42056
Brazil [1997]	0,07281	1,59396
Bulgaria [1999]	0,14131	0,55246
Canada [2000]	-1,17932	-1,15722
Chile [2000]	-0,42296	0,39903
China [2001]	0,45827	-1,50132
Colombia [1998]	0,13339	-0,32860
Croatia [1999]	-0,07525	0,58302
Czech Republic [1999]	-0,99273	0,22380
Denmark [1999]	-2,15271	-1,02601
Dominican Republic [1996]	0,23134	-0,37255
Egypt [2000]	1,55878	-1,80361
El Salvador [1999]	0,86786	0,06298
Estonia [1999]	-0,62562	1,18742
Finland [2000]	-1,35510	-0,61301
France [1999]	-1,60311	0,79870
Georgia [1996]	0,90504	0,83050
Germany West [1999]	-1,38045	-0,11204
Great Britain [1999]	-1,20566	-0,26451
Greece [1999]	-0,75721	1,02687
Hungary [1999]	-0,15168	0,82649
Iceland [1999]	-1,64298	-1,34893

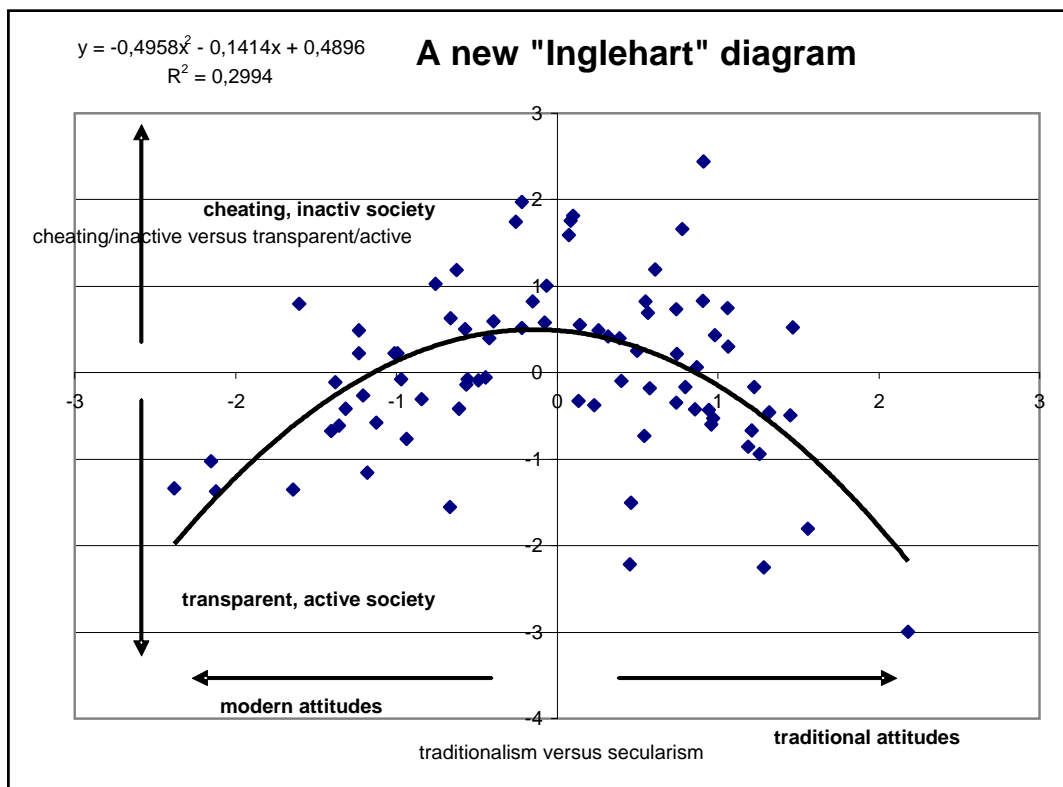
India [2001]	0,79819	-0,16288
Indonesia [2001]	1,32012	-0,45486
Iran (Islamic Republic of) [2000]	0,54234	-0,72874
Iraq [2004]	0,95986	-0,59910
Ireland [1999]	-0,60975	-0,41524
Israel [2001]	-0,49082	-0,09050
Italy [1999]	-0,55784	-0,07662
Japan [2000]	-0,56309	-0,13872
Jordan [2001]	1,25786	-0,94243
Kyrgyzstan [2003]	0,56410	0,69381
Latvia [1999]	-0,39771	0,59187
Lithuania [1999]	0,09780	1,81607
Luxembourg [1999]	-1,23280	0,22259
Macedonia, Republic of [2001]	0,54884	0,82797
Malta [1999]	0,73998	-0,34532
Mexico [2000]	0,38685	0,40264
Morocco [2001]	1,18597	-0,85225
Netherlands [1999]	-2,37923	-1,33596
New Zealand [1998]	-1,12324	-0,57700
Nigeria [2000]	0,96989	-0,53043
Norway [1996]	-1,40500	-0,67692
Pakistan [2001]	1,22330	-0,16422
Peru [2001]	0,49801	0,25632
Philippines [2001]	1,06083	0,74534
Poland [1999]	0,25855	0,49050
Portugal [1999]	-0,57290	0,50291
Republic of Korea [2001]	1,06552	0,29930
Republic of Moldova [2002]	0,90879	2,44318
Romania [1999]	0,73986	0,73428
Russian Federation [1999]	-0,25748	1,74323
Saudi Arabia [2003]	0,94484	-0,42943
Serbia [2001]	-0,21779	0,51637
Singapore [2002]	0,39791	-0,09253
Slovakia [1999]	-0,06542	1,00414
Slovenia [1999]	-0,66117	0,62790
South Africa [2001]	0,74342	0,21813
Spain [2000]	-1,01087	0,22768
Sweden [1999]	-2,12020	-1,37100
Switzerland [1996]	-1,31573	-0,41449
Tanzania, United Republic Of [2001]	1,28572	-2,24675
Turkey [2001]	1,46386	0,52287
Uganda [2001]	0,85649	-0,42537

Ukraine [1999]	0,08443	1,75682
United States [1999]	-0,66609	-1,55408
Uruguay [1996]	-0,84206	-0,30694
Venezuela [2000]	0,57608	-0,18172
Viet Nam [2001]	0,45080	-2,21551
Zimbabwe [2001]	1,21187	-0,66514

Note: our own calculations and compilations, based on the World Values Survey data

Our model based on the residuals from Inglehart/Etzioni path of transformation from traditional to modernity shown in Graph 4 has the following mathematical properties:

Graph 4: Residuals from the Inglehart/Etzioni path of transformation from tradition to modernity



Note: Note: our own calculations and compilations, based on the World Values Survey data, wave 3 + 4. The following WVS country values were submitted to an explorative principal component analysis: always respect parents; belief in hell; cheating taxes; education for tolerance and respect important; jobs scarce men have rights; mean acceptability homosexuality; mean acceptance government benefits fraud; never praying; not satisfied with democracy; only God-believing politicians; openly racist; rejecting foreign workers; rejecting homosexual neighbour, belong voluntary welfare elderly; taking bribes; unpaid social welfare work. Our analysis yielded two factors: a continuum of "traditional versus secular", and a continuum „cheating versus active society“. *Asabiyya* is defined then empirically by the residuals from the factor scores of "traditional versus secular", and „cheating versus active society“. *Asabiyya* means high secularism and a high active society score, thus avoiding the "modernization trap" of an increasingly secular society, which accepts cheating on taxes; accepts government benefits fraud and taking bribes. According to the empirical analysis of this essay, the "active society" of

volunteer organization work is the best societal medicine against this kind of value decay, which is so common in countries like France, Brazil, or most of East Central Europe and the former USSR

The residuals from the above function now can be called a modern, factor analytical and regression analytical definition of “*Asabiyya*”. It is also interesting to note that Muslim societies approximately adhere to the same process of secularization, but that their chances to recover from the “trough” of the modernization crisis are better than for the global average.

Thus, a modern vision of Islam in the 21st Century would exactly presuppose to provide an answer to the “trough” of the “modernization crisis” around the world – to stimulate an active law-abiding society, and give an answer to the secularization of values by networks of volunteers. The result of our analysis on how Islam could overcome the modernization crisis is depicted in Table 2. The rank of countries by secular, active, trend global and Muslim active society indices are as follows:

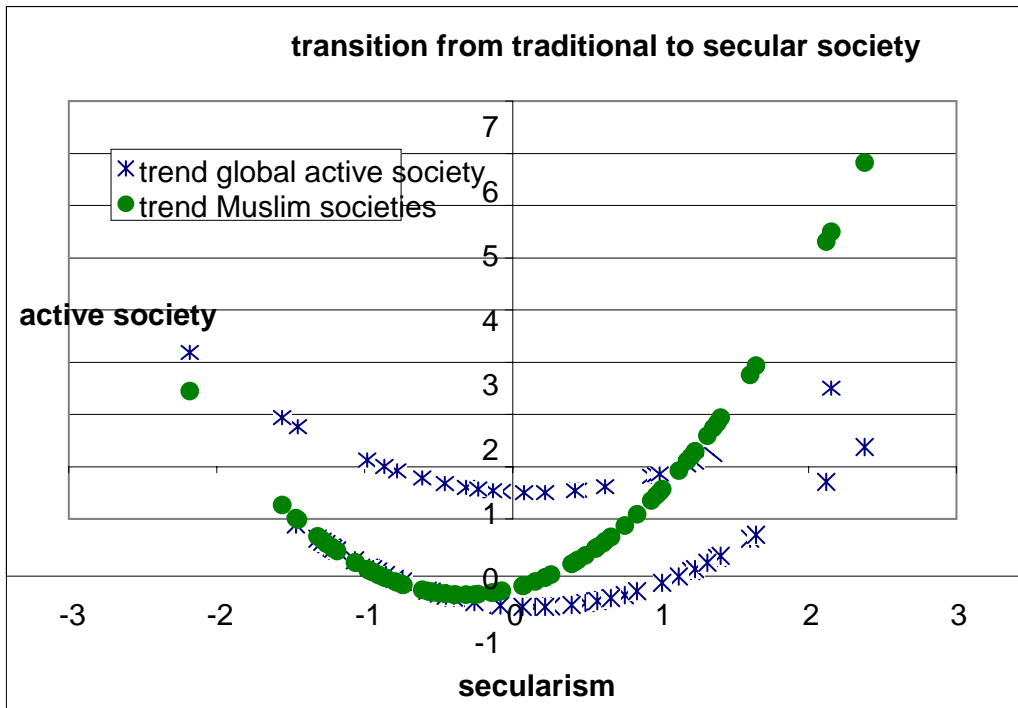
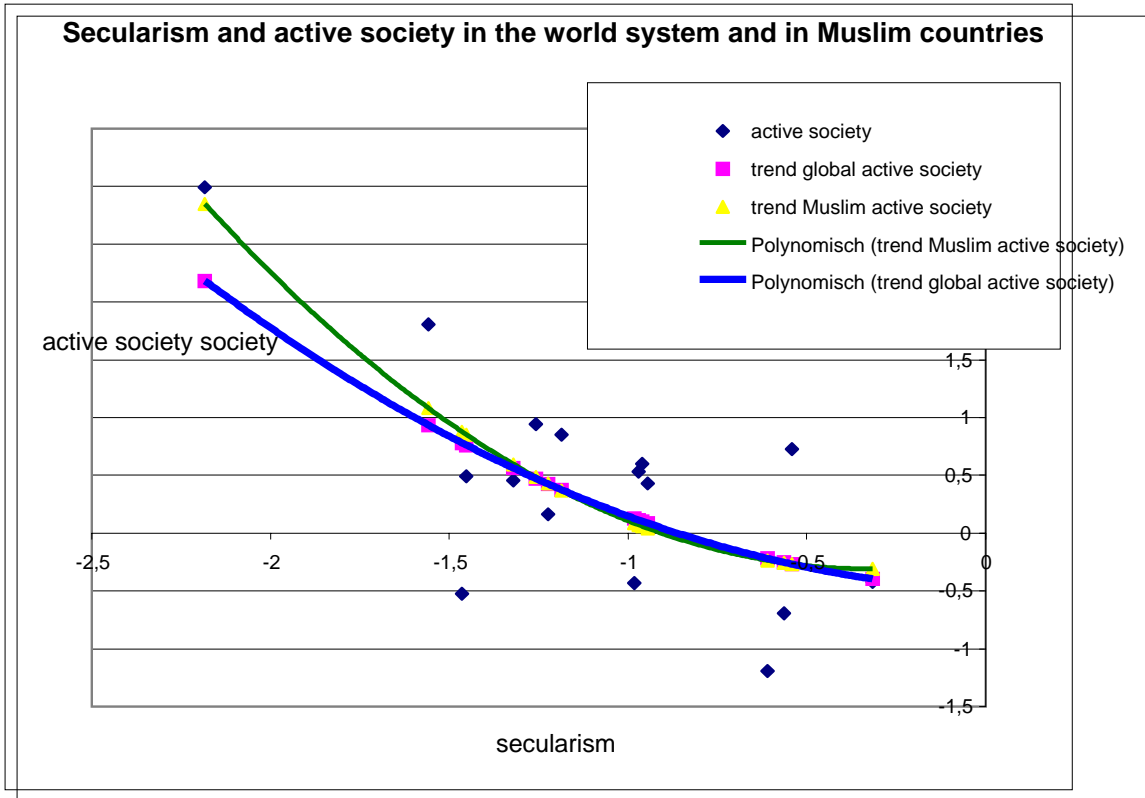
Table 2: How Islam could overcome the modernization crisis

	secular society	active society	trend global active society	trend Muslim active society
Albania [2002]	-0,98230	-0,4326	0,12772691	0,08530043
Algeria [2002]	-1,45209	0,49094	0,76124692	0,85197953
Azerbaijan [1997]	-0,61006	-1,19167	-0,21882790	-0,23519324
Bangladesh [2002]	-2,18350	2,99290	2,18320337	2,85004324
Bosnia and Herzegovina [2001]	-0,31595	-0,42056	-0,39546735	-0,30897578
Egypt [2000]	-1,55878	1,80361	0,93561723	1,08240801
Indonesia [2001]	-1,32012	0,45486	0,56117711	0,59578959
Iran (Islamic Republic of) [2000]	-0,54234	0,72874	-0,26710175	-0,26621937
Iraq [2004]	-0,95986	0,59910	0,10294314	0,05879277
Jordan [2001]	-1,25786	0,94243	0,47278557	0,48599817
Kyrgyzstan [2003]	-0,56410	-0,69381	-0,25208614	-0,25716565
Morocco [2001]	-1,18597	0,85225	0,37550415	0,36805510
Nigeria [2000]	-0,96989	0,53043	0,11395901	0,07052692
Pakistan [2001]	-1,22330	0,16422	0,42537934	0,42811761
Saudi Arabia [2003]	-0,94484	0,42943	0,08663335	0,04156528
Turkey [2001]	-1,46386	-0,52287	0,77992942	0,87637738

Note: see note under Table 1

The trend line graphs for different world and Muslim societies in Graph 5 show that Muslim nations have more social cohesion in the process of modernization:

Graph 5: Muslim nations have more “Asabiyya” (social cohesion) in the process of modernization



Notes: see before

7. The country maps of global value change

In the following, we will try to map the main results of our analysis on a global scale. We specified that *Asabiyya* is a high residual along the pathway of modernization; societies which are active and transparent along the course of the secularization process are characterized by *Asabiyya*.

The global logic of *Asabiyya* has the following basic characteristics. First we look at the continuum traditional versus secular. The factor “traditional societies versus secular societies” has positive factor loadings above 0.500 with:

- always respect parents
- belief in hell
- jobs scarce men have rights
- rejecting foreign workers
- openly racist
- rejecting homosexual neighbors
- only God-believing politicians

The factor “traditional societies versus secular societies” has negative factor loadings of minus 0.500 or more with the variables:

- mean acceptability homosexuality
- education for tolerance and respect important
- never praying

The map of this traditional universe (see Map1) is characterized as follows: the traditionalist cultural gap in San Diego, California, USA, is far less pronounced as the traditionalist versus secular gap which separates Europe from its Muslim neighbors; and in general, Muslim countries are presenting the most traditional “landscape”. The ten most traditional societies in the world are all Muslim societies or are heavily influenced by Muslim culture:

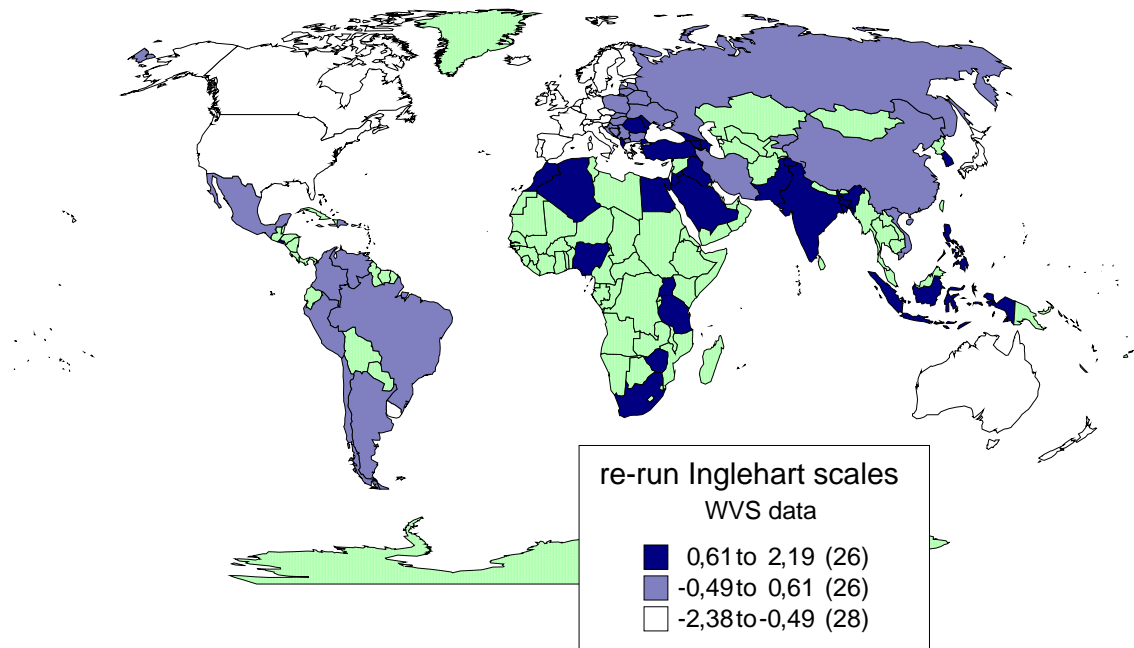
- | | |
|---------------------|-------------------|
| • Bangladesh [2002] | • Tanzania [2001] |
| • Egypt [2000] | • Jordan [2001] |
| • Turkey [2001] | • Pakistan [2001] |
| • Algeria [2002] | • Zimbabwe [2001] |
| • Indonesia [2001] | • Morocco [2001] |

The ten most secular countries on earth are:

- | | |
|----------------------|-----------------------|
| • Netherlands [1999] | • Norway [1996] |
| • Denmark [1999] | • Germany West [1999] |
| • Sweden [1999] | • Finland [2000] |
| • Iceland [1999] | • Switzerland [1996] |
| • France [1999] | • Luxembourg [1999] |

As is shown in Map 1, El Salvador, Romania and South Korea are the most traditionalist western countries, while in the Middle East region; Iran already reached an intermediate stage:

Map 1: Traditional versus secular values in the global system



Note: see before. Missing values for Ecuador, Bolivia, and Paraguay, most of Central America, Africa, West Asia and South-east Asia.

The intransparent, inactive society which emerges on Factor 2 of our model is characterized by loadings of more than 0.500 with the following variables:

- cheating taxes
- taking bribes
- not satisfied with democracy
- mean acceptance government benefits fraud

The highest negative loadings (i.e. signs of a transparent, active society) of minus 0.500 or more are achieved on this factor by the variables:

- belong voluntary welfare elderly
- unpaid social welfare work

In a way, Etzioni's "active society" paradigm shows the way how a society can steer the pathways of modernization and secularization. If you want to avoid having a society, where cheating taxes, taking bribes, dissatisfaction with democracy and acceptance of government benefits frauds becomes the rule, you have to mobilize society in volunteer organizations, all the more so in a multicultural society. This is a

most welcome form of “*djihad*”; the “*djihad*” of caring for the elderly and sick, the “*djihad*” of unpaid social welfare work, the “*djihad*” of bringing cakes to the home for the elderly, and spending an afternoon with disabled children. The cheating versus active society is shown in Map 2. It is no coincidence that some European societies are among the most crisis-ridden countries along this global scale:

- Republic of Moldova [2002]
- Belarus [2000]
- Lithuania [1999]
- Ukraine [1999]
- Russian Federation [1999]
- Armenia [1997]
- Brazil [1997]
- Azerbaijan [1997]
- Estonia [1999]
- Greece [1999]

But also developments in:

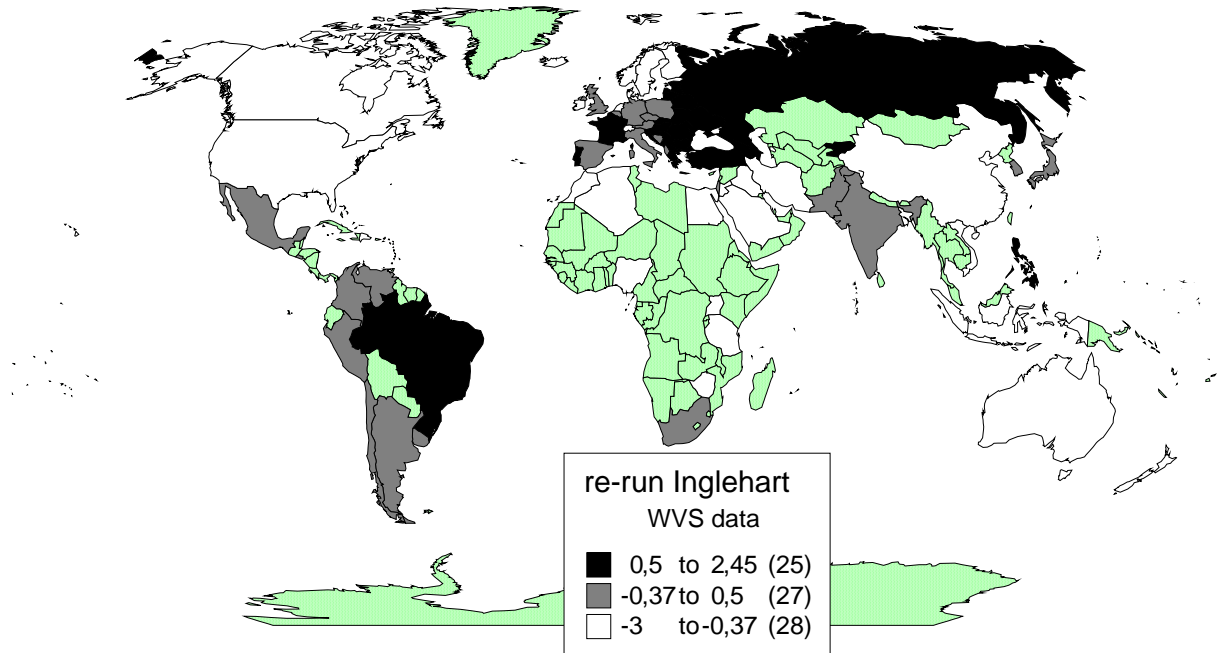
- Slovakia [1999]
- Georgia [1996]
- Macedonia, Republic of [2001]
- Hungary [1999]
- France [1999]
- Philippines [2001]
- Romania [1999]
- Kyrgyzstan [2003]
- Slovenia [1999]
- Latvia [1999]

are far from satisfactory. The real stars along this scale are:

- Bangladesh [2002]
- Tanzania [2001]
- Viet Nam [2001]
- Egypt [2000]
- United States [1999]
- China [2001]
- Sweden [1999]
- Iceland [1999]
- Netherlands [1999]
- Canada [2000]

These are the societies, where civil society is fairly developed and where resistance against the darker sides of modernity – the kind of moral decay, which you associate with cheating taxes, taking bribes, dissatisfaction with democracy, and acceptance of government benefits fraud, is greatest.

Map 2: The cheating versus the active society – global values in the global system



Note: see before. Missing values for Ecuador, Bolivia, and Paraguay, most of Central America, Africa, West Asia and South-east Asia.

“*Asabiyya*” is nothing else, but the ability of a society to perform well along the path of Graph 5. All upward residuals (good transparency standards, good volunteer services, the process of modernization, i.e. secularization notwithstanding) are societies possessing “*Asabiyya*”, while societies, which are intransparent and do not care for the social need in voluntary services, do not possess “*Asabiyya*”. The 20 leading countries along this scale are:

- Viet Nam [2001]
- United States [1999]
- China [2001]
- Tanzania, [2001]
- Canada [2000]
- Iran [2000]
- Australia [1995]
- Egypt [2000]
- Bangladesh [2002]
- Ireland [1999]
- Dominican Republic [1996]
- Colombia [1998]
- Iceland [1999]
- New Zealand [1998]
- Uruguay [1996]
- Japan [2000]
- Israel [2001]
- Argentina [1999]
- Iraq [2004]
- Italy [1999]

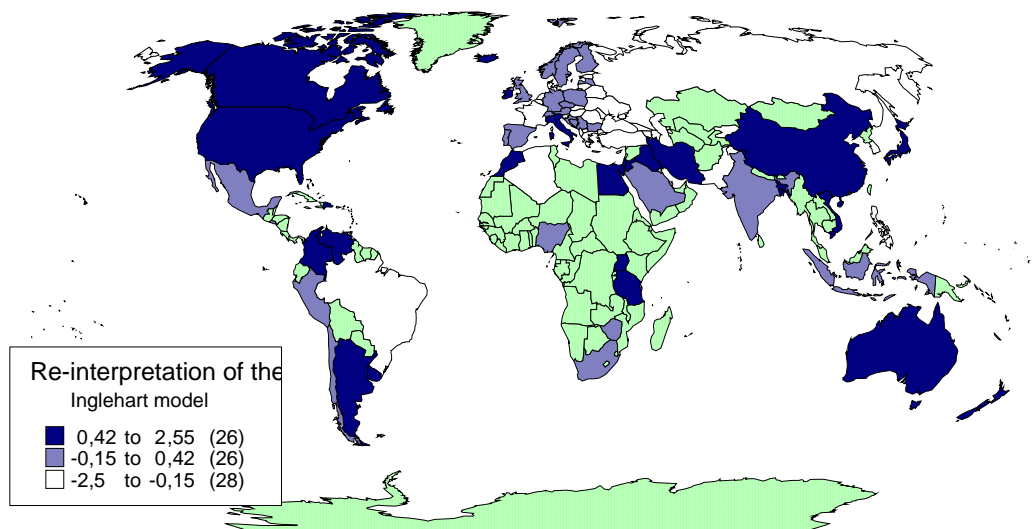
The 20 most problematic country cases are:

- Republic of Moldova [2002]
- Armenia [1997]
- Belarus [2000]
- France [1999]
- Lithuania [1999]
- Turkey [2001]
- Ukraine [1999]
- Russian Federation [1999]
- Brazil [1997]
- Azerbaijan [1997]
- Philippines [2001]
- Georgia [1996]
- Estonia [1999]
- Greece [1999]
- Netherlands [1999]
- Romania [1999]
- Belgium [1999]
- Macedonia, Republic of [2001]
- Albania [2002]
- Republic of Korea [2001]

In a way, their social cohesion is severely threatened, and they are very much in need of the positive role models, which are so characteristic of Amitai Etzioni's "active society". It is interesting to note that there are two categories of Muslim societies along this scale – the high "Asabiyya" Muslim countries, like Iran, Egypt, Bangladesh, and the post-communist or post secularism Muslim countries, like Turkey, Azerbaijan and Albania, characterized by low values of "social cohesion".

Based on our result, the world map of Global *Asabiyya*, shown in Map 3, is the following:

Map 3: Global *Asabiyya* – countries with a high capacity to avoid the modernization trap of high secularism + loss of civic values, absolutely needed for the functioning of a democracy and the market economy



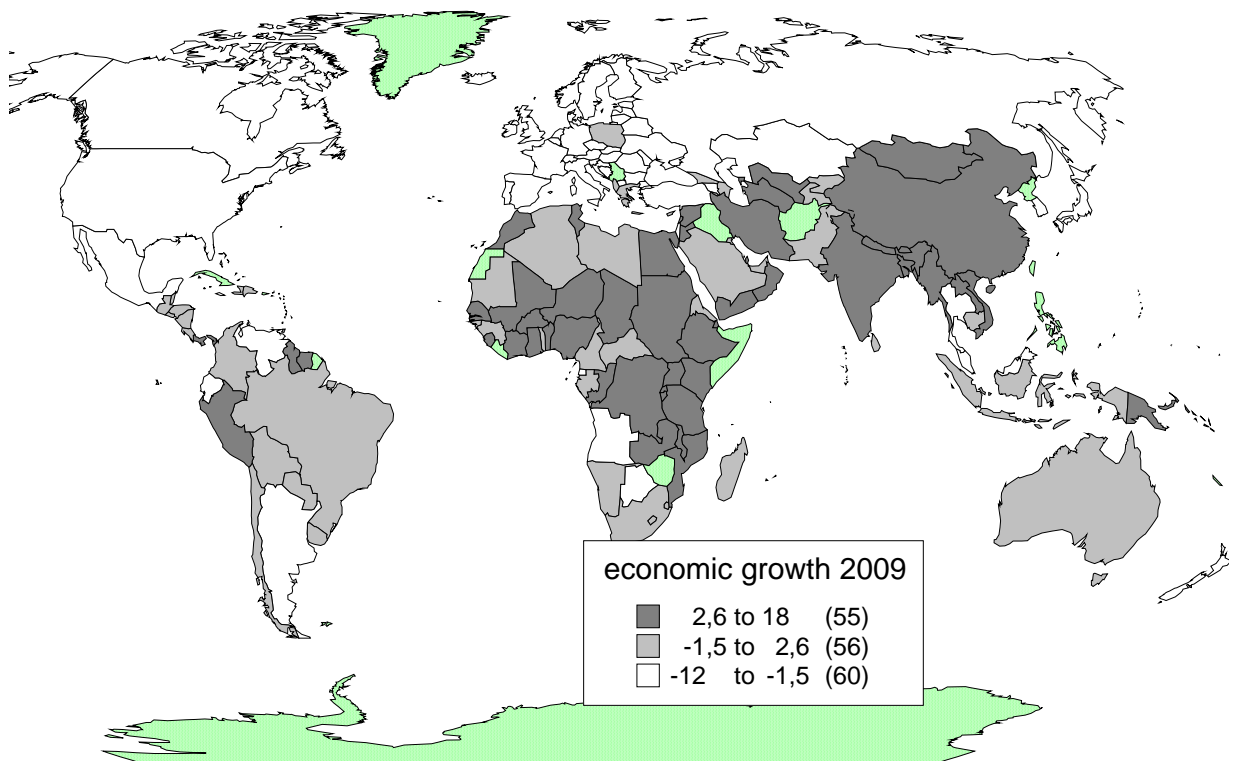
Note: see before. Missing values for Ecuador, Bolivia, and Paraguay, most of Central America, Africa, West Asia and South-east Asia.

8. Global Value change and socio-economic development

In the following, we will analyze the relationships of these social cohesion variables and value indices with current economic growth during the ongoing global recession. We wish to know whether this severe economic crisis have anything to do with the landscapes of social values, analyzed in this article? Our analysis of the relationship between our independent variables and economic growth (based on IMF data and projections, 2009) will be presented in the shortest possible fashion.

The world maps of the estimates of economic growth in 2009 and 2010, based on the IMF (2009) data system seem to confirm the fundamental shifts in world economic centres of gravity, already predicted by Frank, 1998, underlining the necessity to reflect some of the basic assumptions of the development theory discipline. We show the economic growth in 2009 and 2010 in Map 4.A and Map 4.B.

Map 4.A: Economic growth in the world system, 2009

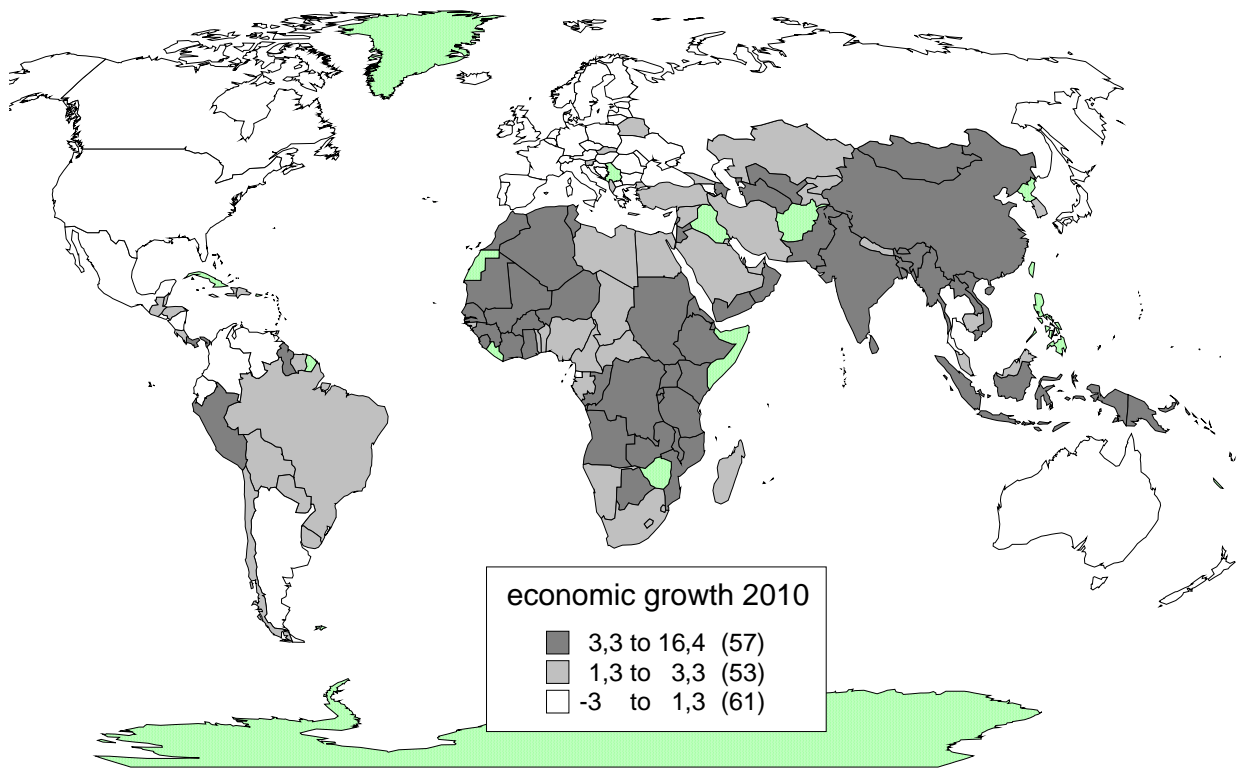


Note: Missing values for Greenland, Serbia, and some countries in Africa and West Asia.

Source: our own map from the data of

<http://www.imf.org/external/pubs/ft/weo/2009/01/weodata/weoselgr.aspx>

Map 4.B: Economic growth in the world system, 2010



Note: Missing values for Greenland, Serbia, and some countries in Africa and West Asia.

Source: our own map from the data of
<http://www.imf.org/external/pubs/ft/weo/2009/01/weodata/weoselgr.aspx>

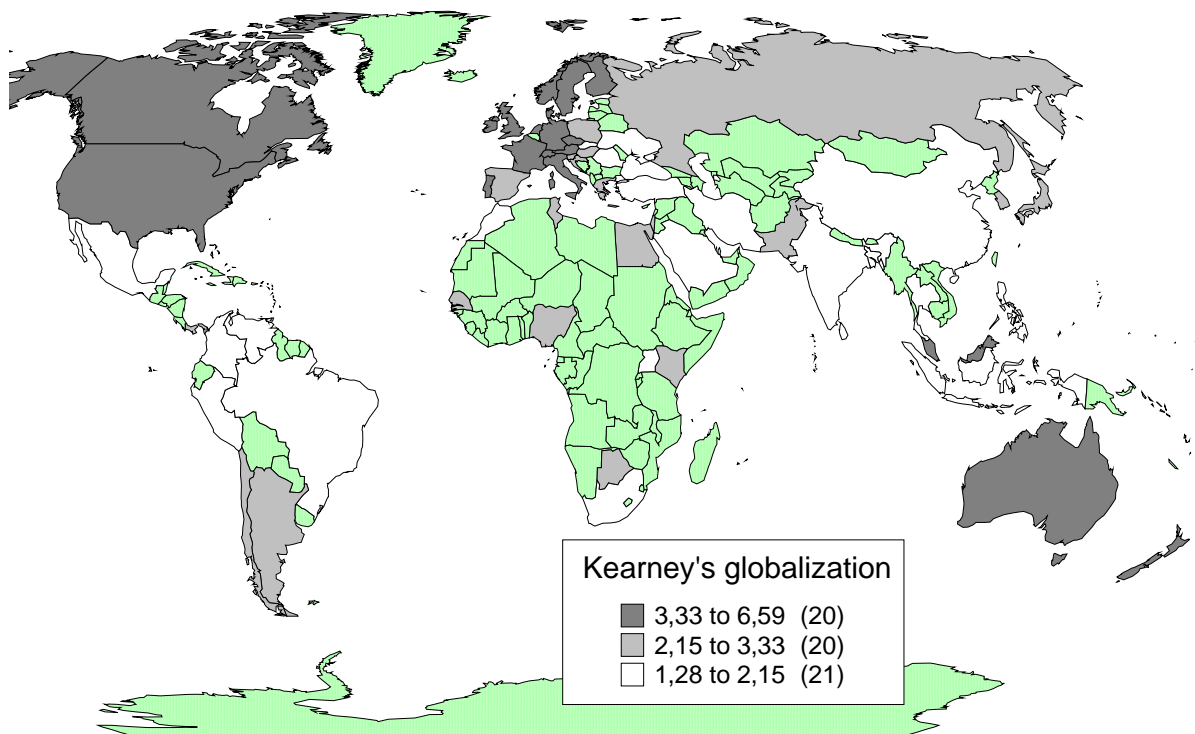
The dependent variable is predicted economic growth in 2009 and 2010. The variations in economic growth among countries are explained by the independent variables of our analysis correspond to the following data:

- Percent of the adult population engaged in voluntary social work (*World Values Survey*, aggregate country data, wave 3 + 4)
- Percent of the adult population saying they believe in hell (*World Values Survey*, aggregate country data, wave 3 + 4)
- Asabiyya – see above (principal component analysis, based on *World Values Survey* data, aggregate country data, wave 3 + 4)
- Cheating society – see above (principal component analysis, based on *World Values Survey* data, aggregate country data, wave 3 + 4)
- Kearney globalization – see below
- ln GDP per capita (UNDP, 2005)
- ln GDP per capita² (UNDP, 2005)

- Traditional society – see above (principal component analysis, based on *World Values Survey* data, aggregate country data, wave 3 + 4)

The explanatory power of the variables presented here, is also compared by Kearney's globalization index (See Map 5). The Kearney index has much to do with openness, connectivity, and also infrastructure (see Kearney A. T. 2002; 2003; furthermore Heshmati, 2006). The Kearney Index combines the dimension of foreign direct investment with government transfers; Gross Domestic Product; international organization membership; international travel; internet hosts; internet users; peacekeeping missions; population; remittances and personal transfers; secure Internet servers; telephone traffic; trade; and treaties. Not surprisingly, in 2007 the ten most globalized countries according to the Kearney methodology were Singapore, Hong Kong, the Netherlands, Switzerland, and Ireland, followed by Denmark, the United States, Canada, Jordan and Estonia. The typical peripheries and semi-peripheries of the world system are generally ranked very low on the Kearney index. The rank of the countries differ somewhat, when a parametric approach is used where, unlike in the Kearney index, different weights are attached to different globalization index components (for details see Heshmati, 2006). But we decided to use here the untransformed original indicator for 2004.

Map 5: Kearney's globalization

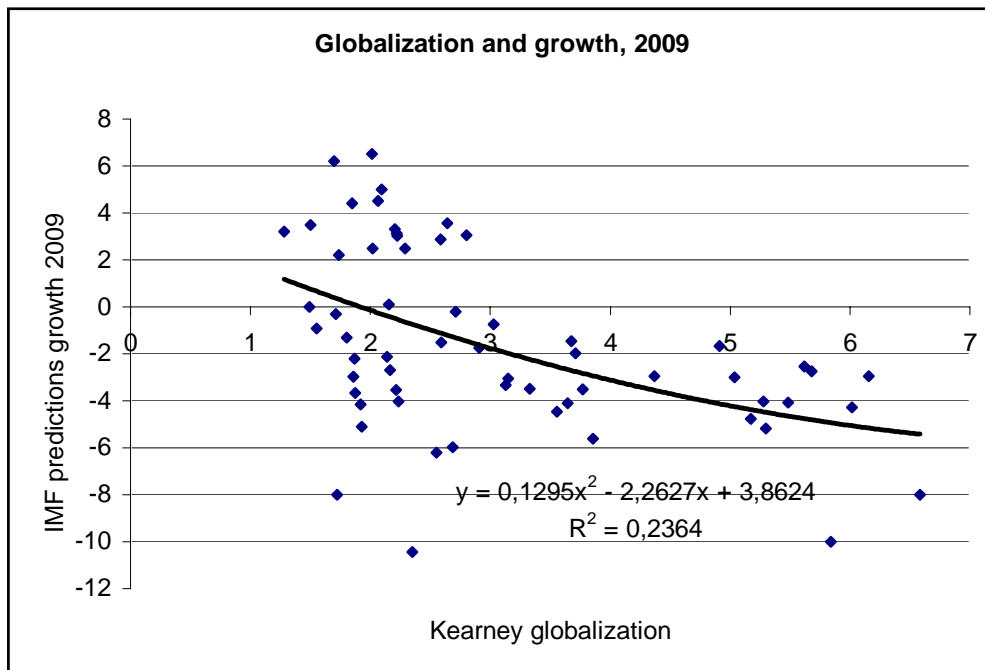


Note: Missing values for Greenland, Iceland, several countries in Central and South America, Africa, and West Asia and Southeast Asia.

Source: our own map from the data presented by Kearney and Bhandari/Heshmati

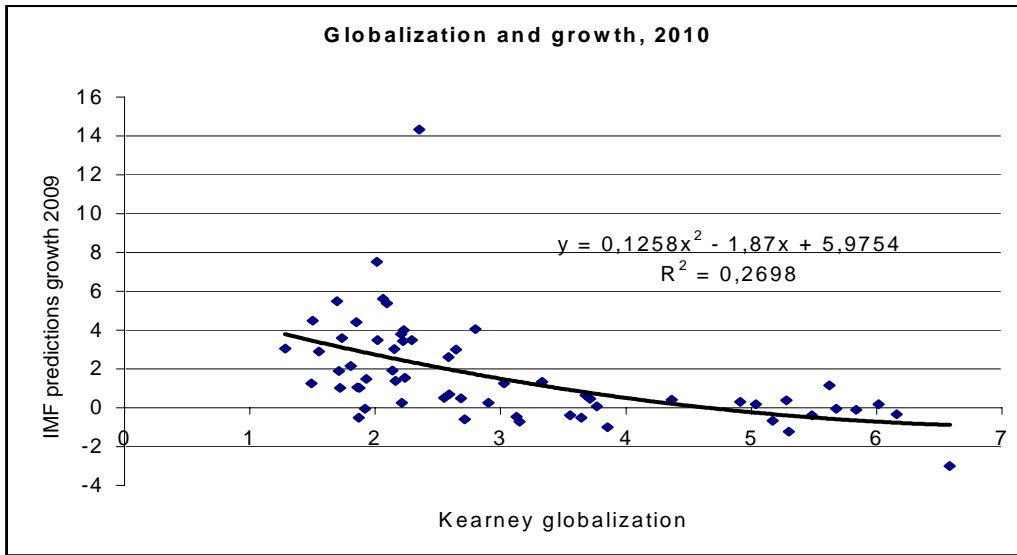
Graph 6 and 7 show the bi-variate statistical relationship between Kearney's globalization index and economic growth in 2009 and 2010. The first order coefficient in both cases is negative while the squared coefficient is positive and statistically significantly different from zero. Globalization explains 24 and 27 percent of the variations in predicted economic growth in 2009 and 2010, respectively. The data suggest that there is an inverse and quite remarkable relationship between past globalization and growth perspectives in 2009 and 2010, suggesting that economic growth in the world system now shifts towards those countries that rank lower on Kearney's globalization index, while the highly globalized country bear the full brunt of the economic depression. The economic crisis threw the highly globalized countries into the abyss of depression, while the less globalized countries are the shining new superstars. This is evidenced by fast recovery of the Korean, Chinese and Indian economies and their ability to experience positive economic growth while all highly globalized economies still suffer from the effects of financial crisis.

Graph 6: Globalization (Kearney) and economic growth, 2009



Source: our own Microsoft EXCEL 2003 graph, based on the data by IMF 2009 (observed and projected economic growth, 2009) and Kearney's globalization index (Bhandari/Heshmati, 2008).

Graph 7: Globalization (Kearney) and economic growth, 2010



Source: our own Microsoft EXCEL 2003 graph, based on the data by IMF 2009 (predicted economic growth, 2010) and Kearney's globalization index (Bhandari/Heshmati, 2008).

Table 3 now compares the predictive power of Barro's master variable – belief in hell – with one of the most important background variables of this article, voluntary social work, which can be well-founded in the active society paradigm by Etzioni, 1968. For reasons of brevity, we only compare the predictive power for the 2010 projections, and omit here the results for 2009, because the data for 2010 are certainly more future-oriented. According to standard macro-quantitative development research praxis, we include the natural logarithm of per capita income and its square as an additional controlling variable. The result for 2010 in Table 3 show that belief in hell and log of GDP per capita and its square do not have effect on the predicted level of economic growth but voluntary social work does positively. These variables dominated by voluntary work explain 58 percent of the variations in predicted economic growth in 2010.

Table 3: Volunteers and belief in hell in the explanation of economic growth, 2010 (IMF prediction)

		B	Standard error	Beta	T	Error probability
	(Constant)	4,455	14,957		0,298	0,767
Belief in hell	VAR00008	0,009	0,009	0,114	1,043	0,303
Voluntary social work	VAR00020	0,113	0,039	0,333	2,887	0,006
ln GDP per capita	VAR00070	0,162	3,273	0,08	0,049	0,961
ln GDP per capita ²	VAR00071	-0,070	0,18	-0,616	-0,388	0,700

N = 51; adj. R² = 57.8%; F = 18.089; p = .000.

Source: our own calculations, based on the data of this article and SPSS XIV – XV; as implemented at the Computing Centre, Innsbruck University, Austria

The result for 2009 in Table 4 show that belief in hell and again log of GDP per capita and its square doe not have any effect on the predicted level of economic growth. Traditional and cheating society and level of globalization affect negatively the predicted level of economic growth, while Asabiyya influences economic growth positively. These variables together explain 69 percent of the variations in predicted economic growth in 2009. In 2010 only cheating remains statistically significant contributor to a negative economic growth. The fit of the model is lower, but yet 64% of the variations in predicted economic growth in 2010 are explained by the model.

Table 4: Predicting economic growth, 2009

		B	Standard error	Beta	T	Error probability
	(Constant)	30,108	37,087		0,812	0,421
In GDP per capita	VAR00070	-3,519	8,432	-0,878	-0,417	0,678
In GDP per capita ²	VAR00071	0,048	0,483	0,219	0,100	0,921
Traditional society	VAR00001	-1,246	0,528	-0,352	-2,361	0,023
Cheating society	VAR00002	-1,249	0,541	-0,303	-2,308	0,026
Asabiyya	VAR00003	1,267	0,618	0,243	2,049	0,046
Kearney globalization	VAR00064	-1,085	0,417	-0,444	-2,604	0,012

N = 52; adj. R² = 68.6%; F = 19.575; p = .000

Source: our own calculations, based on the data of this article and SPSS XIV – XV; as implemented at the Computing Centre, Innsbruck University, Austria

Table 5: Predicting IMF economic growth, 2010

		B	Standard error	Beta	T	Error probability
	(Constant)	-1,554	21,824		-0,071	0,944
In GDP per capita	VAR00070	2,313	4,962	1,046	0,466	0,643
In GDP per capita ²	VAR00071	-0,198	0,284	-1,628	-0,695	0,490
Traditional society	VAR00001	-0,145	0,311	-0,074	-0,468	0,642
Cheating society	VAR00002	-0,695	0,318	-0,306	-2,184	0,034
Asabiyya	VAR00003	0,225	0,364	0,078	0,618	0,540
Kearney globalization	VAR00064	-0,420	0,245	-0,312	-1,714	0,093

N = 52; adj. R² = 64.3%; F = 16.310; p = .000

Source: our own calculations, based on the data of this article and SPSS XIV – XV; as implemented at the Computing Centre, Innsbruck University, Austria

Our equations show the predictive power of the new value change paradigm for explaining future economic growth. No growth is possible without an active and honest society. It would be interesting to examine the relationship by using panel data to evaluate the long term effect of such association accounting for country heterogeneity by level of development and form of societies.

9. Conclusion

We have shown in this article that quantitative evidence suggests that the transition of a traditional towards a modern society presupposes the existence of at least functioning networks of volunteer organizations, often motivated by religious or post-religious humanism and altruism. To negate this dimension of the necessary "*Asabiyya*" of a society would certainly open up the way of social decay, so aptly described by the Arab historian and philosopher Ibn Khaldoun centuries ago. Phenomena of child poverty in developed countries, extensively documented in Heshmati/Tausch/Bajalan, 2008, are just one sign of this social decay, which goes along with the hyper-destruction of classic family structures in the process of what is called "modernization". Strict separation of state and religious communities and demand for full gender equality, yes, but a society needs the compassion and the humanism and the volunteer work of both non-religious and religious humanists in order to survive. This is also an important roadmap for the question of the role of religion in a modern society.

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Appendix A: List of *World Values Survey* variables:

1. mean left-right position
2. not satisfied with democracy
3. openly racist
4. openly anti-Semitic
5. belief in hell
6. only God-believing politicians
7. mean acceptability homosexuality
8. mean acceptance competition
9. secularization rate (never attending rel. Services)
10. always respect parents
11. education for tolerance and respect important
12. never praying
13. thrift important in education
14. mean workaholic scale
15. jobs scarce men have rights
16. belong voluntary welfare elderly
17. unpaid social welfare work
18. just can't be too careful
19. mean satisfaction income
20. mean acceptance government benefits fraud
21. unpaid work religious organizations
22. for less materialism
23. emphasis on authority good
24. income differences good
25. government sector
26. Confidence in the EU
27. rejecting foreign workers
28. rejecting homosexual neighbour
29. never occupy building/factory
30. Islamophobia

Appendix B: Data sources for the analysis of globalization and value change in world society

1. Heshmati A. and Tausch A. (Eds.) „Roadmap to Bangalore”? Globalization, the EU’s Lisbon Process and the Structures of Global Inequality”. Hauppauge, NY: Nova Science Publishers Inc
2. IMF <http://www.imf.org/external/datamapper/index.php>
3. UNDP Human Development Report Office
<http://hdr.undp.org/en/statistics/data/>
4. World Values Survey, <http://www.worldvaluessurvey.org/> University of Michigan

1	independent variable	<i>World Values Survey</i>	traditional values (principal component analysis from WVS data)
2	independent variable	<i>World Values Survey</i>	intransparent, inactive (principal component analysis from WVS data)
3	independent variable	<i>World Values Survey</i>	"Asabiyya" (principal component analysis from WVS data)
8	independent variable	<i>World Values Survey</i>	belief in hell
20	independent variable	<i>World Values Survey</i>	unpaid social welfare work
64	independent variable	<i>Kearney/Bhandari/Heshmati</i>	Kearney Index mid 2000s
70	independent variable	<i>calculated from UNDP</i>	ln GDP per capita
71	independent variable	<i>calculated from UNDP</i>	ln GDP per capita ^2
125	dependent variable	<i>IMF</i>	IMF prediction growth rate in 2009
126	dependent variable	<i>IMF</i>	IMF prediction growth rate in 2010

Appendix C: Analysis of WVS data

Ibn Khaldoun revisited: a principal components analysis of central *World Values Survey* indicators.

Mean substitution of missing World Values Survey country data values

Variable definition	Indicator	Initial	Extraction (% of total variance explained)
mean left-right position	VAR00001	1	0,238
not satisfied with democracy	VAR00002	1	0,405
openly racist	VAR00003	1	0,501
openly anti-Semitic	VAR00004	1	0,256
belief in hell	VAR00005	1	0,681
only God-believing politicians	VAR00006	1	0,491
mean acceptability homosexuality	VAR00007	1	0,783
mean acceptance competition	VAR00008	1	0,228
secularization rate (never attending rel. Services)	VAR00009	1	0,245
always respect parents	VAR00010	1	0,734
education for tolerance and respect important	VAR00011	1	0,43
never praying	VAR00012	1	0,309
thrift important in education	VAR00013	1	0,141
mean workaholic scale	VAR00014	1	0,11
jobs scarce men have rights	VAR00015	1	0,626
belong voluntary welfare elderly	VAR00016	1	0,41
unpaid social welfare work	VAR00017	1	0,323
just can't be too careful	VAR00018	1	0,385
mean satisfaction income	VAR00019	1	0,138
mean acceptance government benefits fraud	VAR00020	1	0,301
cheating taxes	VAR00021	1	0,516
taking bribes	VAR00022	1	0,409
unpaid work religious organizations	VAR00023	1	0,313
for less materialism	VAR00024	1	0,161
emphasis on authority good	VAR00025	1	0,213
income differences good	VAR00026	1	0,127
government sector	VAR00027	1	0,226
Confidence in the EU	VAR00028	1	0,157
rejecting foreign workers	VAR00029	1	0,497
rejecting homosexual neighbour	VAR00030	1	0,523
never occupy building/factory	VAR00031	1	0,122
Islamophobia	VAR00032	1	0,259

The cumulated share of total variance explained by the model

	Total	% of variance	cumulated %
1	7,653	23,915	23,915
2	3,603	11,26	35,175

The loadings:

		traditional versus secular attitudes	cheating versus active society
mean left-right position	VAR00001	0,335	-0,355
not satisfied with democracy	VAR00002	0,294	0,564
openly racist	VAR00003	0,651	-0,278
openly anti-Semitic	VAR00004	0,498	0,092
belief in hell	VAR00005	0,805	-0,179
only God-believing politicians	VAR00006	0,633	-0,301
mean acceptability homosexuality	VAR00007	-0,877	-0,114
mean acceptance competition	VAR00008	-0,385	0,282
secularization rate (never attending rel. Services)	VAR00009	-0,472	-0,147
always respect parents	VAR00010	0,849	0,115
education for tolerance and respect important	VAR00011	-0,557	-0,346
never praying	VAR00012	-0,53	0,17
thrift important in education	VAR00013	0,26	0,27
mean workaholic scale	VAR00014	0,327	-0,058
jobs scarce men have rights	VAR00015	0,787	-0,08
belong voluntary welfare elderly	VAR00016	-0,091	-0,634
unpaid social welfare work	VAR00017	0,194	-0,534
just can't be too careful	VAR00018	0,446	0,431
mean satisfaction income	VAR00019	-0,311	-0,203
mean acceptance government benefits fraud	VAR00020	0,111	0,537
cheating taxes	VAR00021	-0,281	0,661
taking bribes	VAR00022	-0,02	0,639
unpaid work religious organizations	VAR00023	0,365	-0,424
for less materialism	VAR00024	-0,399	-0,034
emphasis on authority good	VAR00025	0,416	-0,199
income differences good	VAR00026	0,329	-0,135
government sector	VAR00027	0,452	0,148
Confidence in the EU	VAR00028	0,375	0,129
rejecting foreign workers	VAR00029	0,685	-0,168
rejecting homosexual neighbour	VAR00030	0,635	0,347
never occupy building/factory	VAR00031	0,342	0,068
Islamophobia	VAR00032	0,382	0,336

Factor scores

	traditional	intransparent, inactive	predicted value	bad performance low transparency and low activity even at high levels of development)	good performance
Viet Nam [2001]	0,451	-2,216	0,325	-2,541	2,541
United States [1999]	-0,666	-1,554	0,364	-1,918	1,918
China [2001]	0,458	-1,501	0,321	-1,822	1,822
Tanzania, [2001]	1,286	-2,247	-0,512	-1,735	1,735
Canada [2000]	-1,179	-1,157	-0,033	-1,124	1,124
Iran ([2000]	0,542	-0,729	0,267	-0,996	0,996
Australia [1995]	-0,937	-0,765	0,187	-0,952	0,952
Egypt [2000]	1,559	-1,804	-0,936	-0,868	0,868
Bangladesh [2002]	2,184	-2,993	-2,183	-0,810	0,810
Ireland [1999]	-0,610	-0,415	0,392	-0,807	0,807
Dominican Republic [1996]	0,231	-0,373	0,430	-0,803	0,803
Colombia [1998]	0,133	-0,329	0,462	-0,791	0,791
Iceland [1999]	-1,643	-1,349	-0,616	-0,732	0,732
New Zealand [1998]	-1,123	-0,577	0,023	-0,600	0,600
Uruguay [1996]	-0,842	-0,307	0,257	-0,564	0,564
Japan [2000]	-0,563	-0,139	0,412	-0,551	0,551
Israel [2001]	-0,491	-0,091	0,440	-0,530	0,530
Argentina [1999]	-0,443	-0,055	0,455	-0,510	0,510
Iraq [2004]	0,960	-0,599	-0,103	-0,496	0,496
Italy [1999]	-0,558	-0,077	0,414	-0,491	0,491
Morocco [2001]	1,186	-0,852	-0,376	-0,477	0,477
Jordan [2001]	1,258	-0,942	-0,473	-0,470	0,470
Malta [1999]	0,740	-0,345	0,113	-0,459	0,459
Singapore [2002]	0,398	-0,093	0,355	-0,447	0,447
Uganda [2001]	0,856	-0,425	0,005	-0,430	0,430
Venezuela [2000]	0,576	-0,182	0,244	-0,425	0,425
Nigeria [2000]	0,970	-0,530	-0,114	-0,416	0,416
Norway [1996]	-1,405	-0,677	-0,290	-0,386	0,386
Finland [2000]	-1,355	-0,613	-0,229	-0,384	0,384
Saudi Arabia [2003]	0,945	-0,429	-0,087	-0,343	0,343
Zimbabwe [2001]	1,212	-0,665	-0,410	-0,255	0,255
Austria [1999]	-0,971	-0,078	0,160	-0,238	0,238
Switzerland [1996]	-1,316	-0,414	-0,183	-0,232	0,232
India [2001]	0,798	-0,163	0,061	-0,224	0,224
Great Britain [1999]	-1,206	-0,265	-0,061	-0,204	0,204
Chile [2000]	-0,423	0,399	0,461	-0,062	0,062
Peru [2001]	0,498	0,256	0,296	-0,040	0,040
Serbia [2001]	-0,218	0,516	0,497	0,019	-0,019
Bosnia and Herzegovina [2001]	0,316	0,421	0,395	0,025	-0,025
Mexico [2000]	0,387	0,403	0,361	0,042	-0,042
Sweden [1999]	-2,120	-1,371	-1,439	0,068	-0,068
El Salvador [1999]	0,868	0,063	-0,007	0,070	-0,070
Poland [1999]	0,259	0,491	0,420	0,071	-0,071
Czech Republic [1999]	-0,993	0,224	0,141	0,082	-0,082
Croatia [1999]	-0,075	0,583	0,497	0,086	-0,086
Bulgaria [1999]	0,141	0,552	0,460	0,093	-0,093
Portugal [1999]	-0,573	0,503	0,408	0,095	-0,095

Spain [2000]	-1,011	0,228	0,126	0,102	-0,102
Indonesia [2001]	1,320	-0,455	-0,561	0,106	-0,106
South Africa [2001]	0,743	0,218	0,110	0,108	-0,108
Latvia [1999]	-0,398	0,592	0,467	0,124	-0,124
Germany West [1999]	-1,380	-0,112	-0,260	0,148	-0,148
Pakistan [2001]	1,223	-0,164	-0,425	0,261	-0,261
Slovenia [1999]	-0,661	0,628	0,366	0,261	-0,261
Algeria [2002]	1,452	-0,491	-0,761	0,270	-0,270
Luxembourg [1999]	-1,233	0,223	-0,090	0,312	-0,312
Hungary [1999]	-0,152	0,826	0,500	0,327	-0,327
Kyrgyzstan [2003]	0,564	0,694	0,252	0,442	-0,442
Denmark [1999]	-2,153	-1,026	-1,504	0,478	-0,478
Slovakia [1999]	-0,065	1,004	0,497	0,507	-0,507
Republic of Korea [2001]	1,066	0,299	-0,224	0,523	-0,523
Albania [2002]	0,982	0,433	-0,128	0,560	-0,560
Macedonia [2001]	0,549	0,828	0,263	0,565	-0,565
Belgium [1999]	-1,232	0,493	-0,089	0,582	-0,582
Romania [1999]	0,740	0,734	0,114	0,621	-0,621
Netherlands [1999]	-2,379	-1,336	-1,981	0,645	-0,645
Greece [1999]	-0,757	1,027	0,312	0,714	-0,714
Estonia [1999]	-0,626	1,187	0,384	0,803	-0,803
Georgia [1996]	0,905	0,831	-0,044	0,875	-0,875
Philippines [2001]	1,061	0,745	-0,218	0,964	-0,964
Azerbaijan [1997]	0,610	1,192	0,219	0,973	-0,973
Brazil [1997]	0,073	1,594	0,477	1,117	-1,117
Russian Federation [1999]	-0,257	1,743	0,493	1,250	-1,250
Ukraine [1999]	0,084	1,757	0,474	1,283	-1,283
Turkey [2001]	1,464	0,523	-0,780	1,303	-1,303
Lithuania [1999]	0,098	1,816	0,471	1,345	-1,345
France [1999]	-1,603	0,799	-0,558	1,357	-1,357
Belarus [2000]	-0,218	1,973	0,497	1,476	-1,476
Armenia [1997]	0,780	1,664	0,078	1,586	-1,586
Republic of Moldova [2002]	0,909	2,443	-0,048	2,492	-2,492