



Munich Personal RePEc Archive

Revealing the Components of the Intangible Wealth for Morocco

Driouchi, Ahmed and Achehboune, Amale and Gamar, Alae

IEAPS, Al Akhawayn University, Ifrane, Morocco

1 January 2015

Online at <https://mpra.ub.uni-muenchen.de/73997/>

MPRA Paper No. 73997, posted 24 Sep 2016 18:41 UTC

Revealing the Components of the Intangible Wealth for Morocco

By:

Ahmed Driouchi, Amale Achehboune and Alae Gamar

Institute of Economic Analysis & Prospective Studies (IEAPS),

Al Akhawayn University, Ifrane, Morocco

Abstract:

This paper attempts to reveal the intangible components of wealth that need to be considered for further economic and social policies in Morocco. This objective is achieved through selecting secondary time series data and international indices and regressing the residual intangible wealth as measured by the World Bank method, on different components that are likely to be tested as genuine wealth indicators for Morocco. The attained results are not different from those revealed in previous publications. Governance, Intellectual capital besides Safety and Peace in addition to some cultural features appear to be the main components of the intangible wealth in Morocco. They consequently constitute new directions for economic policy improvements.

Keywords: Intangible capital, regression analysis, wealth intangible components.

JEL: O11, Q56, E21.

Introduction

At the microeconomic level, series of intangible assets and values could be easily identified and perceived as affecting the overall wealth of a firm, a household, an individual or community. But, the intangible wealth components are hard to capture and perceive at the macroeconomic level, unless taken as aggregates. Such wealth components could be built around factors such as trust, security, abilities and other amenities that are not captured in the tangible resources. The most important aggregates related to the intangible wealth of a nation and that are mostly cited in the literature account for social, intellectual, knowledge, human, cultural and institutional capitals with series of variations in their compositions and mainly their measurements.

Furthermore, only an aggregate figure of intangible capital of a nation is obtained as a residual and difference between total and tangible wealth. While the tangible part is obtained

as the net values of traded manufacturing and natural flows from goods and services of a nation, the total value of the wealth is the present value of the adjusted genuine wealth generated over the a long time horizon for an economy. Aggregate values for intangible have been obtained over time for series of nations.

The question is then how to identify the major intangible factors that form the most dominant intangible component in Morocco. Does the obtained residual capture one or several components as perceived under culture, trust, safety, abilities, knowledge, governance and organization?

The objective of the present paper is to introduce and test a way that could help reveal the major intangible components included in the overall estimation of the total intangible wealth. This helps in the setting of new economic policies that address sectors and the overall economy to enhance the level of intangible and thus the total wealth of Morocco.

The achievement of the above objective will be mainly based on empirically analyzing the likely relationships between the computed total intangible wealth as residual and series of indices measuring variety of intangible assets.

The present paper is composed of a literature review that addresses how the likely relationships have been discussed globally and in series of economies. This is followed by the presentation of the most important indices that have been developed to capture different intangibles. A methodological part is then introduced to address the procedure, the data and the hypotheses to be used to tackle the basic question of the paper. The last part focuses on the results and their discussion in relation to context of Morocco.

I. Literature Review

The effects of different intangible components of wealth on the economic performance have been discussed in series of publications. These include papers centered on the effects of trust, institutions, intellectual capital, safety, trust and other dimensions related human resources.

McCracken, M. (1998) considers that culture is a set of ethical habits and reciprocal moral obligations internalized by members of each community. To the author, trust is related to dependability that members will follow the norms defined by the culture. Social capital is

then a capability that arises from the prevalence of trust in a society. This can range from the family to a nation, and is reflected in the adoption of a set of common norms. Social cohesion relates to the notion of “glue” or “linkages” between people.

The common starting point for economics is the individual, with tastes taken as given, with given characteristics which are often lumped together into the concept of human capital. The stock of human capital is augmented by education, informal and formal training, and experiences. Human capital is taken as the explanation for differential incomes among people. The author refers then to better economic performance improves social cohesion, particularly as gains are shared among the economic partners and social programs. To the author, there is growing evidence that there is a strong causal linkage from social cohesion to macroeconomic performance. Channels through which an improvement in social cohesion (social capital) can impact macroeconomic performance, directly and indirectly include reduced transaction costs as trust between organizations and people allows for transactions to take place with high confidence that payments will be made, and higher investment ratio as an increase in the investment ratio as a result of greater trust and more credible policies can influence the long-term growth prospects of the nation by raising the rate of productivity growth. In addition, encouragement of innovation - more entrepreneurial time available for innovation and better performance of government institutions, lead to increases in education, enhanced provision of public goods, and better public policy.

When considering culture only, Casson (2006) insists on its nature as an economic asset and a form of cultural capital. It is an intangible public good, shared by the members of a social group. The author has shown that the influence of culture on the economy extends well beyond the production and consumption of cultural goods. Values and beliefs of a suitable kind can improve economic performance. The high-performance culture also encourages both freedom and responsibility. In addition, a moral culture will rely on trust to as much as possible, but will underpin trust by the rule of law.

Chiu (1998) shows that greater income equality implies higher human capital accumulation and economic performance in an overlapping-generations model with heterogeneity in income and talent. Given liquidity constraints and declining marginal utility, individuals with a given level of talent receive education if their initial income is higher than a threshold level and the threshold is lower for more talented individuals. Assuming the more talented create more human capital when educated, greater initial income equality for one

generation then imply not only higher aggregate human capital accumulated by that generation but an improvement in all subsequent generations' initial income distributions.

Beugelsdijk, De Grooty, and Van Schaikz (2004) analyze the robustness of results on the relationship between growth and trust previously derived by other authors. They show that the results of Knack and Keefer are only limitedly robust, whereas those of Zak and Knack are highly robust in terms of significance of the estimated coefficients and reasonably robust in terms of the estimated effect size. The improvement in robustness is caused by the inclusion of countries with relatively low scores on trust (most notably, the Philippines and Peru). Overall, our results point at a relatively important role for trust. However, the answer to the question how large this payoff actually is depends on the set of conditioning variables controlled for in the regression analysis and—to an even larger extent—on the underlying sample.

On social capital, Nannestad, Tinngaard and Sonderskov (2013) look at the determination of trust in a society and to the quality of levels of social trust, migrants from countries with lower-quality institutions should enhance their level of social trust in countries with higher-quality institutions. If, on the other hand, the migrants' level of social trust is determined by their culture, it should not be affected by a different institutional setting. Furthermore, culturally diverse immigrant groups should have different levels of social trust in the same host country. Analyzing migration from several non-western countries to Denmark, this paper demonstrates that institutions rather than culture matter for social trust.

Mishler and Rose (1997) focuses on trust in social and political institutions to find it vital to the consolidation of democracy, but in post-Communist Europe, distrust is the predicted legacy of Communist rule. Contrary to expectations, however, New Democracies Barometer surveys of popular trust in fifteen institutions across nine Eastern and Central European countries indicate that skepticism, rather than distrust, predominates. Although trust varies across institutions and countries, citizens trust holistically, evaluating institutions along a single dimension. Both early life evaluations influence levels of trust. The legacy of socialization under Communism has mostly indirect effects, whereas the effects of economic and political performance evaluations on trust are larger and more direct. Thus, skepticism reflects trade-offs between public dissatisfaction with current economic performance, optimism about future economic performance, and satisfaction with the political performance of contemporary institutions in providing greater individual liberties than in the Communist past.

Letki (2006) considers that in the last decade considerable research in social sciences has focused on interpersonal trust, treating it as a remedy for most maladies modern democracies suffer from. Yet, if others act dishonestly, trust is turned into gullibility, thus mechanisms linking interpersonal trust with institutional success refer implicitly to honesty and civic morality. This paper investigates the roots of civic morality. It applies hierarchical models to data from 38 countries, and tests the individual, community and structural explanatory factors. The results of the analysis point to the relevance of an institutional dimension, both in the form of individuals' perceptions as well as the quality of governance: confidence in political institutions and their objective quality are the strongest predictors of civic morality. At the same time, the findings show that the recently popular claims about the importance of social capital for citizens' moral standards are largely unfounded.

Algan and Cahuc (2010) develop a new method to uncover the causal effect of trust on economic growth by focusing on the inherited component of trust and its time variation. The authors show that inherited trust of descendants of US immigrants is significantly influenced by the country of origin and the timing of arrival of their forebears. This strategy allows to identify the sizeable causal impact of inherited trust on worldwide growth during the twentieth century by controlling for country fixed effects.

Camacho (2014) insists on a comprehensive theory of support to democracy. Building on instrumental and cultural approaches, the theory argues that experience with democracy conditions the extent to which economic and political performance inform support. The evidence from 21 Latin American countries indicates that both economic and political performance inform support for democracy and that the extent to which economic performance informs and supports declines as a democracy grows older.

Knack and Keefer (2010) compare more direct measures of the institutional environment with both the instability proxies used by Barro (1991) and the Gastil indices (2000), by comparing their effects both on growth and private investment. The results provide substantial support for the position that the institutional roots of growth and convergence are significant. The improvement is that these new variables represent over existing proxies. It also suggests that there are substantial returns to future research into variables that reflect the security of property rights and the efficiency with which states determine economic policies and allocate public goods.

Hamilton and Liu (2013) emphasize the importance of human capital in total wealth. They estimate the value of human capital using the lifetime income approach for a sample of 13 (mostly high-income) countries. This yields a mean share of human capital in total wealth of 62 percent—four times the value of produced capital and 15 times the value of natural capital. But for selected high-income countries in the sample there is still an average of 25 percent of total wealth that is unaccounted—it is neither produced, nor natural, nor human capital. This residual intangible wealth is arguably the “stock equivalent” of total factor productivity—the value of assets such as institutional quality and social capital that augment the capacity of produced, natural and human capital to support a stream of consumption into the future.

World Bank (2006) and mainly in Chapter 7 focusing on Explaining the Intangible Capital Residual with insistence on the role of Human Capital and Institutions in total wealth of a nation, regression analysis is recommended to identify the major determinants of the intangible capital residual with human capital given an important part of any model specification. A proxy for human capital is schooling. Schooling level per person constitutes an imperfect measure of human capital, since it does not take into account the quality of education of those trained, nor other types of human capital investment such as on-the-job training. For institutional capital the model uses the rule of law indicator. It encompasses the respect of citizens and the state for the institutions which govern their interactions. While there is no strong reason to prefer one governance dimension over another, an argument in favor of choosing the rule of law indicator is that it captures particularly well some of the features of a country's social capital.

Cobb (2008) focuses on the above study and emphasizes the role of regression analysis to quantify the contribution of the ‘intangibles’ mainly the value of social institutions and education with social capital explaining 57 percent of the intangible residual and education accounting for 43 percent of intangible wealth. Under this analysis it is fair to say that roughly half of intangible wealth is attributable to education and half is attributable to social capital. This disaggregation and quantification of intangibles provides a useful paradigm for policymakers particularly when undertaking the cost-benefit analysis of a given policy.

Ferreira and Hamilton (2010) estimate total wealth, natural capital, and physical capital for a panel of countries to shed light on the constituents of the intangible capital residual. The authors show that factors of production are very successful in explaining the

variation in output per worker when they use intangible capital instead of human capital as a factor of production. This suggests that intangible capital captures a broad range of assets typically included in the total factor productivity residual. Human capital is an important factor, both in statistical and economic terms, in regressions decomposing intangible capital.

All the above papers suggest intangible wealth components that include governance, culture, peace, trust and stability among others. Different indices have been developed to capture series of dimensions not included in the tangible part of the wealth of nations. They are reviewed below with the objective of selecting those that might pertain to the Moroccan economy.

II. Indices for Intangible Wealth

Different forms and types of capitals have been considered and developed under different social science disciplines and across subjects. Human, intellectual, knowledge, social and institutional capitals have all been described and assessed for countries and groups of economies. They include also social, health and knowledge capitals (Driouchi, 2013). Also, series of indices have been generated to account for variations of levels of prosperity and enjoyments in different economies. Besides variety of indices related to happiness and life satisfaction, there have been attempts to account for genuine progress and sustainably. This section reviews most of the indices that are likely to account for intangible wealth and for applications to Morocco. While the first two indices appear to be relevant for the characterization of intangible wealth, they are only mentioned here, and will not be used in the following analysis because they are too recent or do not have enough observations. Those that will be used in the analysis are introduced under heading number 3.

1. The Social Progress Index (SPI)

One of the most recent indices that account for both tangible and intangibles is the Social Progress index (<http://www.socialprogressimperative.org/data>). The Index is the sum of three dimensions: Basic Human Needs, Foundations of Wellbeing, and Opportunity. Each dimension is made up of four equally weighted individual components scored on an objective scale from 0–100. This scale is determined by identifying the best and worst global performance on each indicator by any country in the last 10 years, and using these to set the maximum (100) and minimum (0) bounds.

Morocco SPI 2014 shows that the country does best in areas including Nutrition and Basic Medical Care but has the greatest opportunity to improve human wellbeing by focusing more on Water and Sanitation. Under the Foundations of Wellbeing Dimension, Morocco excels at providing building blocks for people's lives such as Access to Basic Knowledge but would benefit from greater investment in Ecosystem Sustainability. Of issues covered by the Opportunity Dimension, Morocco outperforms in providing opportunities for people to improve their position in society and scores highly in Personal Freedom and Choice yet falls short in Access to Advanced Education. Social Progress Index 58.01, Basic Human Needs 71.86 Nutrition and Basic Medical Care 87.74 Water and Sanitation 54.56 Shelter 76.18 Personal safety 68.95 Foundations of Wellbeing 62.57, Access to Basic Knowledge 76.68, Access to Information and Communications 63.71 , Health and Wellness 75.37 , Ecosystem Sustainability 34.54, Opportunity 39.60, Personal Rights 41.60, Personal Freedom and Choice 64.82, Tolerance and Inclusion 37.61 and Access to Advanced Education 14.37.

2. World Value Surveys

Values have been assessed within the framework of World Value Surveys from which data related to Morocco are retrieved (WV4_Data_Morocco_2001_spss_v_2014-04-28.zip). They show that family, work and social values have been equally important in 2001 and 2007 as they provide intangible satisfaction to individuals, families and communities. But, interpersonal values such as those related to trust are not as high as for other countries for the same period.

	Total	Sex			Age			
		Male	Female	NA	Up to 29	30-49	50 and more	No Answer
Most people can be trusted	23.0	19.8	26.2	-	23.0	19.3	30.9	-
Need to be very careful	73.4	75.5	71.4	100.0	73.9	77.4	64.1	100.0
Don't know	3.5	4.7	2.3	-	3.1	3.3	5.0	-
(N)	(1251)	(620)	(630)	(1)	(488)	(513)	(247)	(2)

Source: World Values Survey Morocco 2001

Table 1: Results of a question about the trusting attitude in Morocco by sex and categories of age 2001

The sample studied is composed of 1251 persons from both genders starting 18 years old. The results show that 73.4% of the total number surveyed thinks that one need to be very careful in dealing with people while 23% think that most of people can be trusted. The questionnaire was Concerning Morocco 73.4% of the surveyed people estimate that people need to be very careful when dealing with people. For the 620 males and 630 females surveyed 75.5% of the males think they need to be careful in dealing with people against

71.4% of females. The females scored higher percentage with 26.2% of females for 19.8% of males that think that most people can be trusted. The sample was then classified for three categories of age 488 people aged up to 29 years old, 513 people between 30 and 49 years old and 247 people aged 50 and more. 77.4% of the people aged between 30-49 years old think that people need to be very careful in dealing with people followed by 73.9% for people aged up to 29 years old and by 64.1 for those aged 50 and more. On the other hand, the category of age of 50 years and more scored 30.9% of people thinking that most of people can be trusted followed by the 23% for people aged up to 29 and then 19.3% for those aged 30 to 49 years old.

	Total	Sex		Age			
		Male	Female	Up to 29	30-49	50 and more	No Answer
Most people can be trusted	12.8	12.3	13.2	10.3	11.9	18.4	-
Need to be very careful	85.3	86.5	84.2	87.7	86.5	79.2	100.0
Don't know	1.9	1.2	2.6	2.0	1.5	2.4	-
(N)	(1200)	(592)	(608)	(495)	(453)	(250)	(2)

Source: World Values Survey Morocco 2007

Table 2: Results of a question about the trusting attitude in Morocco by sex and categories of age, data 2007

For the questionnaire of 2007, the surveyed sample was 1200 people from both gender and older than 18 years old. From the total number of people surveyed 85.3% estimated that one need to be careful in dealing with people. This percentage increases by 11.9 from the one recorded in 2001. While the percentage of people that think that most people can be trusted decreased by about half from 23% in 2001 to 12.8%. Among the 592 males and the 608 females surveyed 86.5% of the males while 84.2 of the females think that one need to be very careful in dealing with people. These numbers increased by 11% for males and 13.8% for females from the one noted in 2001. Regarding the age categories, people aged up to 29 years old takes the lead with 87.7% thinking that one need to be very careful in dealing with people followed by people aged between 30 to 49 years old (86.5%) and then those aged above 50 years (79.2%). People aged up to 29 years old become more careful in dealing with people compared to 2001. These results are also reflected in the results of people that believe that most of people can be trusted.

	Total	Sex		Age			
		Male	Female	Up to 29	30-49	50 and more	No Answer
Trust Completely	89.1	89.2	89.0	91.1	87.9	87.2	100.0
Somewhat	10.0	10.0	10.0	8.5	11.0	11.2	-
Not very much	0.5	0.5	0.5	0.2	0.4	1.2	-
No trust at all	0.1	0.2	-	-	0.2	-	-
No answer	0.3	0.2	0.5	0.2	0.4	0.4	-
(N)	(1200)	(592)	(608)	(495)	(453)	(250)	(2)

Source: World Values Survey Morocco 2007

Table 3: How much one trusts family for different categories 2007

Results of the survey show that people trust completely the members of their families at 89.1% followed by 10% that believe them somewhat and a slight percentage 0.5% and 0.1% that do not trust them very much of not at all respectively. The gender does not affect the degree of trust put in the family members. However, the degree of trust varies slightly following the age category. The results show that people tend to trust more those aged up to 29 years old (91.1%) followed by the categories of age between 30 and 49 years old and people aged more than 50 years old in equal percentages 87.9% and 87.2%. On the other hand, people trust somewhat members of their families aged more than 30 years old at about 11% for both categories.

	Total	Sex		Age			
		Male	Female	Up to 29	30-49	50 and more	No Answer
Trust Completely	47.9	47.5	48.4	47.9	44.6	53.6	100.0
Somewhat	36.2	35.6	36.7	35.6	39.1	32.4	-
Not very much	11.4	11.1	11.7	11.5	11.7	10.8	-
No trust at all	4.2	5.4	3.0	4.6	4.2	3.2	-
No answer	0.3	0.3	0.3	0.4	0.4	-	-
(N)	(1200)	(592)	(608)	(495)	(453)	(250)	(2)

Source: World Values Survey Morocco 2007

Table 4: How much one trust people from the neighborhood for different categories 2007

About half (47.9%) of people surveyed claim they trust completely people from their neighborhood. The majority of the other half (36.2%) trust people of their neighborhood somewhat. On the other hand, 11.4% do not trust very much people from their neighborhood. The gender does not affect these percentages as they are equal for males and females. However, people do not trust at all males from their neighborhood (5.4%) more than females (3%). The degree of trust varies related to the categories of age. People tend to trust completely those aged 50 and more from their neighborhood (53.6%) this is followed by those aged up to 29 years old (47.9%). Individuals trust somewhat (39.1%) those from their neighborhood and aged between 30 and 49 years old.

	Total	Sex		Age			
		Male	Female	Up to 29	30-49	50 and more	No Answer
Trust Completely	36.8	37.3	36.0	36.6	34.9	40.4	100.0
Somewhat	40.0	39.0	41.0	41.0	41.3	36.0	-
Not very much	18.3	18.4	18.3	17.2	19.9	18.0	-
No trust at all	3.8	3.5	3.9	3.2	3.8	4.8	-
No answer	1.1	1.4	0.8	2.0	0.2	0.8	-
(N)	(1200)	(592)	(608)	(495)	(453)	(250)	(2)

Source: World Values Survey Morocco 2007

Table 5: How much one trust people one knows personally for different categories 2007

The overall results of the survey show that the majority (40%) of people trust somewhat those they know personally, another 36.8% trust them completely. However, 18.3% prefer not to trust very much people they know personally and 3.8% prefer not to trust them at all. The gender does not affect these percentages; however, the age category makes a difference. Among those they know personally and trust somewhat, people prefer those aged up to 29 years old (41%) and those aged between 30 and 49 years old (41.3%). Moreover, people trust completely (40.4%) those aged 50 and more among those they know personally.

	Total	Sex		Age			
		Male	Female	Up to 29	30-49	50 and more	No Answer
Trust Completely	1.2	1.4	1.2	1.2	1.3	1.2	-
Somewhat	19.2	19.9	18.4	19.6	18.3	19.6	50.0
Not very much	44.8	44.1	45.4	47.3	43.7	41.6	50.0
No trust at all	32.6	32.4	32.7	29.9	34.2	35.2	-
No answer	2.2	2.2	2.3	2.0	2.4	2.4	-
(N)	(1200)	(592)	(608)	(495)	(453)	(250)	(2)

Source: World Values Survey Morocco 2007

Table 6: How much one trust those met for the first time for different categories 2007

Regarding people one meets for the first time, the overall results show that the majority with a 44.8% chooses not to trust them very much, 32.6% chooses not to trust them at all and 19.2% prefers to trust them somewhat. The gender does not affect the percentages for each category; however the categories of age present some preferences. For people aged up to 29 years old, one do not trust them very much (47.3%), 29.9% do not trust them at all and 19.6% trust them somewhat. On the other hand, the surveyed individuals (43.7%) do not trust very much those aged between 30 to 49 years old and others (34.2%) do not trust them at all. For those aged 50 and more 41.6% chose not to trust them very much and 35.2% chose not to trust them at all.

	Total	Sex		Age			
		Male	Female	Up to 29	30-49	50 and more	No Answer
Trust Completely	1.2	1.4	1.0	1.6	1.1	-	50.0
Somewhat	20.5	20.6	20.4	22.4	21.9	14.4	-
Not very much	43.2	43.9	42.6	46.5	40.6	42.0	-
No trust at all	31.2	30.7	31.6	26.9	31.6	38.8	50.0
No answer	3.9	3.4	4.4	2.6	4.9	4.8	-
(N)	(1200)	(592)	(608)	(495)	(453)	(250)	(2)

Source: World Values Survey Morocco 2007

Table 7: How much one trust people from another religion for different categories 2007

For those from a different religion, the overall results show that 43.2% do not trust them very much, 31.2% prefer not to trust them at all and only 20.5% choose to trust them somewhat. Gender does not affect the degree of trust one puts on someone from a different religion. Males and females scored the same percentage for each degree of trust toward people

from another religion. Concerning the age categories, the 46.5% do not trust very much people from another religion and aged up to 29 years old, 40.6% chose not to trust very much those aged between 30 and 49 years old and 31.6% choose not to trust them at all. For those aged 50 and more, 42% of the surveyed individuals choose not to trust them very much while, 38.8% choose not to trust them at all.

	Total	Sex		Age			
		Male	Female	Up to 29	30-49	50 and more	No Answer
Trust Completely	1.8	2.0	1.6	2.2	1.8	0.8	50.0
Somewhat	18.8	19.8	17.8	21.2	18.3	14.8	-
Not very much	44.1	45.1	43.1	46.9	44.2	38.8	-
No trust at all	31.6	29.9	33.2	26.9	31.8	40.4	50.0
No answer	3.8	3.2	4.3	2.8	4.0	5.2	-
(N)	(1200)	(592)	(608)	(495)	(453)	(250)	(2)

Source: World Values Survey Morocco 2007

Table 8: How much one trust people from another nationality for different categories 2007

The results of the surveyed individuals show that 44.1% do not trust very much people from another nationality and 31.6% do not trust them at all. On the other hand, only 18.8% would trust somewhat someone from another nationality but 1.8% chose to trust them completely. The gender does not affect the percentages very much and do not vary from the overall percentage described earlier. The difference in the percentages for each degree of trust between males and females is 3.3% for those who do not trust them at all and 2% in the other categories. However, the surveyed individuals show discrepancies in the degree of trust they put on a person following the age. People do not trust very much at 46.9% and 44.2% people from another nationality aged up to 29 years old and those from 30 to 49 years old. On the other hand, the revealed that people aged 50 and more and from another nationality are not trusted at all (40.2%).

The benefits from the other existing indices are related to the length of their series covering more years. These indices related to knowledge, intellectual, social and governance are reviewed in this section. But most of the above indices are either very recent or have few data points that would limit the scope of the time-series analysis.

3. Data and Indices used in the analysis

The following table summarizes all the indices used in the analysis. They have the benefit of time length even if some of them has limited number of years. More details about each index are introduced in table 9.

Variable Code	Variable name	Scale	Years Available	Source of the Data	Link to Data
Int. Wealth	Intangible Wealth		1995 to 2013		
CPI	Corruption Perception Index		1998 to 2014 except 2001	Transparency International	http://www.transparency.org/cpi2013/results#myAnchor1
KEI	Knowledge Economy Index		1995, 2000, 2007, 2008, 2012	Worldbank Data	http://info.worldbank.org/etools/kam2/KAM_page5.asp
KI	Knowledge Index		1995, 2000, 2007, 2008, 2012	Worldbank Data	http://info.worldbank.org/etools/kam2/KAM_page5.asp
AYS	Average Years of Schooling		1995 to 2014	Barro and Lee Database	http://www.barrolee.com/data/dataexp.htm
EPI	Environmental Performance Index	from 1 to 100	2000 to 2014	Columbia University	http://sedac.ciesin.columbia.edu/data/set/epi-environmental-performance-index-pilot-trend-2012
Failed State	Failed State Index		2006 to 2014	The failed State Index	http://ffp.statesindex.org/rankings
GII	Global Innovation Index		2007 to 2014	Worldbank Data	
Trust	Trust		2007		
Voice Acc.	Voice Accoutability	weak (-2.5) and Strong (2.5)	1995 to 2013	The worldwide governance indicators	http://info.worldbank.org/governance/wgi/index.aspx#reports
P. Stability	Political Stability no violence	weak (-2.5) and Strong (2.5)	1995 to 2013	The worldwide governance indicators	http://info.worldbank.org/governance/wgi/index.aspx#reports
Gov. Effectiv	Government Effectiveness	weak (-2.5) and Strong (2.5)	1995 to 2013	The worldwide governance indicators	http://info.worldbank.org/governance/wgi/index.aspx#reports
Reg. Quality	Regulatory Quality	weak (-2.5) and Strong (2.5)	1995 to 2013	The worldwide governance indicators	http://info.worldbank.org/governance/wgi/index.aspx#reports
Rule of Law	Rule of Law	weak (-2.5) and Strong (2.5)	1995 to 2013	The worldwide governance indicators	http://info.worldbank.org/governance/wgi/index.aspx#reports
Cont. Corrupt.	Control of Corruption	weak (-2.5) and Strong (2.5)	1995 to 2013	The worldwide governance indicators	http://info.worldbank.org/governance/wgi/index.aspx#reports
Status Ind.	Status Index	low value bad index	2003, 2006, 2008, 2010, 2012, 2014	The Bertelsmann Stiftung's Transformation Index (BTI)	http://www.bti-project.org/index/status-index/
HDI	Human Development Index		1995, 1997, 2000, 2002, 2005 to 2008 and 2010 to 2013	UNDP	http://hdr.undp.org/en/data
Glob. Peace Index	Global Peace Index		2008 – 2014	Vision of Humanity	http://www.visionofhumanity.org/#page/indexes/global-peace-index/2009/MAR/OVER
Social Cap.	Social Capital	low values lead to weak ranking	from 2009 to 2014	Legatum Prosperity Index	http://www.prosperity.com/#/
Personal Freed.	Personal Freedom	low values lead to weak ranking	from 2009 to 2014	Legatum Prosperity Index	http://www.prosperity.com/#/
Safety & Security	Safety and Security	low values lead to weak ranking	from 2009 to 2014	Legatum Prosperity Index	http://www.prosperity.com/#/

Table 9: Indices used in the analysis

III. Method and Analysis

The method pursued here follows that of World Bank (2006) and Hamilton and Liu (2013) mainly through the use of school attainment for human capital, the rule of law, trust and others. The main method used is regression with instantaneous and lagged variables as:

$$y_t = a_0 + a_1y_{t-1} + a_2y_{t-2} + \dots + a_my_{t-m} + \textit{residual}_t.$$

y_{t-j} Is retained in the regression if and only if it has a significant t-statistic; m is the greatest lag length for which the lagged dependent variable is significant.

Next, the auto-regression is augmented by including lagged values of x:

$$y_t = a_0 + a_1y_{t-1} + a_2y_{t-2} + \dots a_my_{t-m} + b_px_{t-p} + \dots + b_qx_{t-q} + \textit{residual}_t.$$

One retains in this regression all lagged values of x that are individually significant according to their t-statistics, provided that collectively they add explanatory power to the regression according to an F-test

This is achieved through running unrestricted and restricted regressions between each two couple of variables that are found to have enough observations and that represent respectively governance, knowledge, peace, culture and other intangibles. The dependent variable used in all regressions is wealth. The data used are in Appendix 1.

It is recognized though that at least two limitations may affect the attained results. The first one is directly related to the number of variables while the second is the length of the time series.

IV. Results and Discussion

Given the length of the series, it is not possible to include more explanatory variables in the same regression. The analysis is consequently conducted on a bivariate basis after checking that the series are stationary and for the correlations between explanatory variables (Appendix 2). The following results concern only the variables that exhibited a statistically significant coefficient with the dependent variable.

Table 10 shows that the wealth series or the dependent variable is stationary and behaves as an autoregressive process of degree one (ARMA, 1).

Dependent Variable: WEALTH
Method: Least Squares
Date: 12/12/14 Time: 12:42
Sample (adjusted): 2 18
Included observations: 17 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
W_1	1.003413	0.030959	32.41090	0.0000
R-squared	0.462870	Mean dependent var		21.09351
Adjusted R-squared	0.462870	S.D. dependent var		3.685627
S.E. of regression	2.701166	Akaike info criterion		4.882267
Sum squared resid	116.7408	Schwarz criterion		4.931279
Log likelihood	-40.49927	Hannan-Quinn criter.		4.887139
Durbin-Watson stat	2.039722			

Table 10: Wealth Process

The results are respectively shown for governance, knowledge, peace, environment and culture.

1. Governance Indicators

According to Worldbank (2014), Worldwide Governance Indicators encloses six dimensions of governance: Voice & Accountability, Political Stability and Lack of Violence, Government Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption. Variables such as government effectiveness, regulatory quality, rule of law, voice and accountability appear to be affecting positively the intangible wealth. The respective results are shown in tables 11, 12, 13 and 14.

Dependent Variable: GOV__EFFECTIV
Method: Least Squares
Date: 12/12/14 Time: 12:45
Sample (adjusted): 2 18
Included observations: 17 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GE_1	0.848086	0.136480	6.213985	0.0000
R-squared	0.157018	Mean dependent var		-0.098445
Adjusted R-squared	0.157018	S.D. dependent var		0.074060
S.E. of regression	0.067997	Akaike info criterion		-2.481680
Sum squared resid	0.073978	Schwarz criterion		-2.432667
Log likelihood	22.09428	Hannan-Quinn criter.		-2.476808
Durbin-Watson stat	2.526040			

Table 11: Government Effectiveness

Dependent Variable: REG__QUALITY
Method: Least Squares
Date: 12/12/14 Time: 12:48
Sample (adjusted): 2 18
Included observations: 17 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
----------	-------------	------------	-------------	-------

RQ_1	0.857721	0.127817	6.710515	0.0000
R-squared	0.082758	Mean dependent var		-0.146943
Adjusted R-squared	0.082758	S.D. dependent var		0.095819
S.E. of regression	0.091768	Akaike info criterion		-1.882079
Sum squared resid	0.134743	Schwarz criterion		-1.833066
Log likelihood	16.99767	Hannan-Quinn criter.		-1.877207
Durbin-Watson stat	2.454153			

Table 12: Regulatory Quality

Dependent Variable: RULE_OF_LAW
Method: Least Squares
Date: 12/12/14 Time: 12:49
Sample (adjusted): 2 18
Included observations: 17 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RL_1	0.913767	0.093875	9.733886	0.0000
R-squared	0.847152	Mean dependent var		-0.043887
Adjusted R-squared	0.847152	S.D. dependent var		0.187872
S.E. of regression	0.073450	Akaike info criterion		-2.327401
Sum squared resid	0.086318	Schwarz criterion		-2.278388
Log likelihood	20.78290	Hannan-Quinn criter.		-2.322529
Durbin-Watson stat	1.819669			

Table 13: Rule of Law

Dependent Variable: WEALTH
Method: Least Squares
Date: 12/12/14 Time: 13:14
Sample (adjusted): 3 18
Included observations: 16 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RL_2	24.75663	6.975769	3.548946	0.0053
R-squared	0.142160	Mean dependent var		21.58630
Adjusted R-squared	-0.286760	S.D. dependent var		3.175829
S.E. of regression	3.602517	Akaike info criterion		5.681139
Sum squared resid	129.7813	Schwarz criterion		5.970860
Log likelihood	-39.44911	Hannan-Quinn criter.		5.695975
Durbin-Watson stat	2.593329			

Table 14: Rule of Law lagged twice

Dependent Variable: VOICE_ACC_
Method: Least Squares
Date: 12/12/14 Time: 12:50
Sample (adjusted): 2 18
Included observations: 17 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
VA_1	1.002450	0.059109	16.95943	0.0000
R-squared	0.418505	Mean dependent var		-0.605737

Adjusted R-squared	0.418505	S.D. dependent var	0.197105
S.E. of regression	0.150304	Akaike info criterion	-0.895295
Sum squared resid	0.361459	Schwarz criterion	-0.846282
Log likelihood	8.610007	Hannan-Quinn criter.	-0.890423
Durbin-Watson stat	2.785359		

Table 15 : Voice and Accountability

This shows how governance indicators and mainly « voice and accountability », « rule of law », “regulatory quality” and “government effectiveness” appear to be linked to intangible wealth. Any improvement in these measures will positively affect the total wealth.

2. Knowledge

This is represented by the average years of schooling with results shown in table 16. This variable is part of the Barro-Lee dataset that counts estimates from 1950 to 2010 in five years intervals. It measures the school attainment of individuals aged 25 years and above by sex and age. (Barro and Lee, 2014)

Dependent Variable: WEALTH
Method: Least Squares
Date: 12/12/14 Time: 15:15
Sample (adjusted): 2008 2013
Included observations: 6 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
AYS1	5.613847	0.392665	14.29680	0.0001
R-squared	0.186866	Mean dependent var		20.02806
Adjusted R-squared	-0.016418	S.D. dependent var		2.732494
S.E. of regression	2.754833	Akaike info criterion		5.125792
Sum squared resid	30.35642	Schwarz criterion		5.056379
Log likelihood	-13.37738	Hannan-Quinn criter.		4.847924
Durbin-Watson stat	1.988479			

Table 16: Average years of schooling

This result shows how improvements in the average years of schooling (AYS) can enhance intangible wealth. Given the level of correlations between AYS, KEI, KI and GII, the AYS appears to be a measure of access to knowledge and innovation. It also refers to an important component of the intellectual capital.

3. Environment

According to Emerson, Esty, Levy, Kim, Mara, de Sherbinin, and Srebotnjak (2010), the Environmental Performance Index (EPI) variable measures the environmental performance of countries taking into consideration a number of variables. This variable addresses the efforts of country to reduce the environmental effects on health and the creation of a better ecosystem through a better management.

The best results are shown in table 16 with the first lags of intangible wealth and that of the environmental performance index.

Dependent Variable: W1
Method: Least Squares
Date: 12/12/14 Time: 15:50
Sample (adjusted): 2001 2013
Included observations: 13 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EPI1	1.683077	0.414690	4.058636	0.0019
R-squared	0.410997	Mean dependent var		22.40029
Adjusted R-squared	0.357451	S.D. dependent var		2.950922
S.E. of regression	2.365433	Akaike info criterion		4.700438
Sum squared resid	61.54801	Schwarz criterion		4.787353
Log likelihood	-28.55284	Hannan-Quinn criter.		4.682573
Durbin-Watson stat	1.366855			

Table 17: Environmental Performance Index

The quality of the natural environment as measured by EPI appears to be well related to the intangible wealth. Environmental amenities are consequently an important component of the Moroccan wealth.

4. Peace

According to The Fund for Peace (2014), the failed state index or also called fragile state index measures the stability of a country through political stability, the strength of the legitimate authority, availability of public services and relation with other countries.

Dependent Variable: P__STABILITY
Method: Least Squares
Date: 12/12/14 Time: 12:46
Sample (adjusted): 2 18
Included observations: 17 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
PS_1	0.921282	0.115879	7.950355	0.0000
R-squared	0.378152	Mean dependent var		-0.329914
Adjusted R-squared	0.378152	S.D. dependent var		0.235882
S.E. of regression	0.186010	Akaike info criterion		-0.469011
Sum squared resid	0.553595	Schwarz criterion		-0.419999
Log likelihood	4.986597	Hannan-Quinn criter.		-0.464139
Durbin-Watson stat	1.640682			

Table 18: Political Stability

Dependent Variable: W1
Method: Least Squares

Date: 12/12/14 Time: 15:45
Sample (adjusted): 2009 2013
Included observations: 5 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
FAILED_STATE	0.305223	0.225791	1.351794	0.4055
FS1	2.142175	0.412850	5.188744	0.1212
R-squared	0.998464	Mean dependent var		20.44683
Adjusted R-squared	0.993857	S.D. dependent var		2.831585
S.E. of regression	0.221929	Akaike info criterion		-0.182352
Sum squared resid	0.049253	Schwarz criterion		-0.494802
Log likelihood	4.455880	Hannan-Quinn criter.		-1.020936
Durbin-Watson stat	3.521241			

Table 19: Failed State Index

This result is confirmed using the safety and security index from Legatum. The Legatum prosperity index is developed by the Legatum Institute (2014) and gathers eight sub-indexes: Economy, Entrepreneurship & Opportunity, Governance, Education, Health, Safety and Security, Personal Freedom and Social Capital. This latter is an annual index based on 89 variables over 140 countries and takes into consideration a variety of elements like the economic growth, education, well-being and quality of life. The current study uses three of the sub-indices mentioned above. It includes Social Capital that measures the social involvement of individuals in the social welfare of a nation. It measures the participation in volunteer work, donate for charity and help strangers. This sub-index includes also the trust in family members and trust in general. It also accounts for Personal Freedom (This sub-index includes economic freedom, the freedom in religion and speech, the freedom of choice and tolerance toward immigrants and minorities). In addition, Safety and Security as a sub-index measuring the national and personal safety based on factors like the fear of crime and the personal safety by gender. It also includes fear from the political system and the freedom of political expression, the mental health and wellbeing.

Only one sub-component that is safety-security appears to be statistically significant in relation to the first difference of the intangible wealth series. The results are introduced in table 20.

Dependent Variable: DW
Method: Least Squares
Date: 12/22/14 Time: 14:08
Sample (adjusted): 2009 2013
Included observations: 5 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
SAFETY__SECURITY	41.56921	7.015448	5.925383	0.0273
SOCIAL_CAP_	-6.700606	4.522685	-1.481555	0.2766

PERSONAL_FREED_	-6.628033	6.389775	-1.037287	0.4086
R-squared	0.269659	Mean dependent var		-38.71661
Adjusted R-squared	-0.460681	S.D. dependent var		4.965953
S.E. of regression	6.001783	Akaike info criterion		6.705700
Sum squared resid	72.04280	Schwarz criterion		6.471362
Log likelihood	-13.76425	Hannan-Quinn criter.		6.076762
Durbin-Watson stat	1.967258			

Table 20: Legatum Indices

5. Culture

According to the Bertelsmann Stiftung website (2014), the Status index is part of the Bertelsmann Stiftung's Transformation Index (BTI). This latter evaluates how the developing countries and those in transition are directing their efforts for democracy and economic changes. On the other hand, the status index measures the political and economic transformation degrees. This index defines the position of each country on their path toward democracy.

Dependent Variable: WEALTH
Method: Least Squares
Date: 12/12/14 Time: 14:17
Sample (adjusted): 2003 2012
Included observations: 5 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
STATUS_IND_	4.702501	0.313529	14.99863	0.0001
R-squared	0.167610	Mean dependent var		22.05136
Adjusted R-squared	0.167610	S.D. dependent var		3.609808
S.E. of regression	3.293424	Akaike info criterion		5.398589
Sum squared resid	43.38656	Schwarz criterion		5.320476
Log likelihood	-12.49647	Hannan-Quinn criter.		5.188943
Durbin Watson	1.7899			

Table 21: Status Index from The Bertelsmann Stiftung's Transformation Index (BTI)

Given the reduced length of the time series, only partial tests have been performed. But, these tests appear to be conclusive for the likely variables that are connected with the intangible wealth as measured by the residual method. The components of wealth that are tested and that show interesting links are governance, knowledge, peace and environmental performance. The cultural dimension represented by individual status appear also to be related to intangible wealth. The policy implications of these results are clearly indicating that more openness, democratization besides education and access to knowledge lead to higher intangible and thus total wealth for Morocco.

Conclusion

The results attained in this article are consistent with previous literature on other countries. They open the road to further transformations to be tackled around education and knowledge besides governance, peacefulness and security with cultural components that account for the valuation of the individuals and groups in the economy. But longer time series data are needed to perfect the analysis.

References

- Algan, Y. and Cahuc, P. (2010). Trust and Growth. *American Economic Review*, Vol. 100, No. 5 (DECEMBER 2010), pp. 2060-2092. Published by: American Economic Association. URL: <http://www.jstor.org/stable/41038755>
- Barro and Lee. (2014). About the Dataset: Introduction. Retrieved Monday 22nd December 2014 from <http://www.barrolee.com/>
- Bertelsmann Stiftung (2014). Transformation Index BTI 2014. Retrieved Monday 22nd December 2014 from <http://www.bti-project.org/index/methodology/>
- Beugelsdijk, S., De Grooty, H L.F and Van Schaikz, A. BTM. (2004). Trust and economic growth: a robustness analysis. *Oxford University Press 2004 Oxford Economic Papers* 56 (2004), 118–134 118.
- Camcho, L.A. (2014). Understanding Regime Support in New and Old Democracies. The Role of Performance and Democratic Experience. German Development Institute, Discussion paper 10/2014.
- Casson, M. (2006). Culture and Economic Performance. Chapter 12 in Handbook of the Economics of Art and Culture. Edited by Victor A. Ginsburgh and David Throsby, Volume 1, 2006, Pages 359–397, ISBN: 978-0-444-53776-8
- Chiu, W.H. (1998). Income Inequality, Human Capital Accumulation and Economic Performance. *The Economic Journal*, Vol. 108, No. 446 (Jan., 1998), pp. 44-59. Published by: Wiley on behalf of the Royal Economic Society URL: <http://www.jstor.org/stable/2565736>
- Cobb, S.M. (2008). Quantifying the Wealth of Nations: The Impact of Intangible Capital and Implications for Policy Formulation. *The Ambassadors REVIEW*, Fall 2008 pp: 1-33.

- Driouchi, A. (2013). ICTs for Health, Education, and Socioeconomic Policies: Regional Cases (pp. 1-340). Hershey, PA: IGI Global. doi:10.4018/978-1-4666-3643-9
- Emerson, J., D. C. Esty, M.A. Levy, C.H. Kim, V. Mara, A. de Sherbinin, and T. Srebotnjak. (2010). 2010 Environmental Performance Index. New Haven: Yale Center for Environmental Law and Policy. Retrieved Monday 22nd December 2014 from http://www.ciesin.org/documents/EPI_2010_report.pdf
- Ferreira, S. and Hamilton, K. (2010). Comprehensive Wealth Intangible Capital and Development. Policy Research Working papers, Policy Research Working Paper 5452, October 2010.
- Fund for Peace. (2014). What Does "State Fragility" Mean? Retrieved Monday 22nd December 2014 from <http://ffp.statesindex.org/faq-06-state-fragility>
- Gastil, R. D. Comparative Survey of Freedom, 1972-1976. ICPSR07555-v1. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2000. <http://doi.org/10.3886/ICPSR07555.v1>
- Hamilton, K. and Liu, G. (2013). Human Capital, Tangible Wealth, and the Intangible Capital Residual. Policy Research Working Paper 6391. The World Bank Development Research Group. Environment and Energy Team March 2013.
- Knack, S. and Keefer, P. (2010). Institutions and Economic Performance: Cross-Country Tests Using Alternative Institutional Indicators. Online at <http://mpra.ub.uni-muenchen.de/23118/> MPRA Paper No. 23118, posted 8. June 2010
- Legatum prosperity Institute. (2014). Principles of Prosperity Retrieved Monday 22nd December 2014 from <http://www.prosperity.com/#!/principles-of-prosperity>
- Letki, N. (2006). Investigating the Roots of Civic Morality: Trust, Social Capital, and Institutional Performance. *Political Behavior*, Vol. 28, No. 4 (Dec., 2006), pp. 305-325 Published by: Springer, URL: <http://www.jstor.org/stable/4500227>
- McCracken, M. (1998). Social Cohesion and Macroeconomic Performance. Conference on the State of Living Standards and the Quality of Life Ottawa, Canada October 30-31, 1998.
- Mishler, W., and Rose, R. (1997). Trust, Distrust and Skepticism: Popular Evaluations of Civil and Political Institutions in Post-Communist Societies. *The Journal of Politics*, Vol. 59, No. 2 (May, 1997), pp. 418-451 Published by: The University of Chicago

Press on behalf of the Southern Political Science Association URL:

<http://www.jstor.org/stable/2998171>

Nannestad, P., Tinggaard, G., Thisted P. and Sønderskov, M. (2014). Do Institutions or Culture Determine the Level of Social Trust? The Natural Experiment of Migration from Non-western to Western Countries, *Journal of Ethnic and Migration Studies*, 40:4, 544-565, DOI: [10.1080/1369183X.2013.830499](https://doi.org/10.1080/1369183X.2013.830499)

Stiftung, B. (2014). Transformation Index BTI 2014. Retrieved Monday 22nd December 2014 from <http://www.bti-project.org/index/methodology/>

World Bank (2006). *Where is the Wealth of Nations? Measuring Capital for the 21st Century*. The World Bank, Washington, D.C. 2006, 188 pages.

Worldbank Data. (2014). *Worldwide Governance Indicators*. Retrieved Monday 22nd December 2014 from <http://info.worldbank.org/governance/wgi/index.aspx#home>

APPENDIX I: THE DATA

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Wealth	10.966	12.363	13.209	18.766	17.477	17.885	23.925	23.257	24.179	24.168	24.837	25.641	25.078	21.151	22.845	22.982	18.952	16.304	17.934	
CPI				3.700	4.100	4.700		3.700	3.300	3.200	3.200	3.200	3.500	3.500	3.300	3.400	3.400	37.000	37.000	39.000
KEI	4.170					3.740							3.300	3.450				3.610		
KI	4.030					3.330								3.330				3.250		
AYS	2.660	2.660	2.660	2.660	2.660	3.260	3.260	3.260	3.260	3.260	3.790	3.790	3.790	3.790	3.790	4.240	4.240	4.240	4.240	4.240
EPI						42.966	43.637	44.166	44.872	45.066	44.740	45.074	45.259	45.466	46.154	45.757	45.760	45.760	51.890	51.890
Failed State												76.500	76.000	75.800	77.100	77.000	76.300	76.100	74.300	74.400
GII													2.230	2.760	2.740	2.760	28.730	30.700	30.900	32.200
Trust													27.400							
Voice Acc.	-0.359	-0.359	-0.186	-0.186	-0.467	-0.467	-0.516	-0.516	-0.838	-0.546	-0.732	-0.728	-0.733	-0.789	-0.778	-0.728	-0.736	-0.629	-0.722	
P. Stability	-0.293	-0.293	0.214	0.214	-0.165	-0.165	-0.348	-0.348	-0.420	-0.305	-0.548	-0.475	-0.511	-0.600	-0.410	-0.383	-0.395	-0.462	-0.500	
Gov. Effectiv	-0.033	-0.033	0.027	0.027	-0.031	-0.031	-0.139	-0.139	-0.101	-0.079	-0.259	-0.143	-0.163	-0.174	-0.131	-0.091	-0.127	-0.045	-0.073	
Reg. Quality	-0.174	-0.174	-0.061	-0.061	-0.055	-0.055	-0.158	-0.158	-0.270	-0.234	-0.405	-0.177	-0.197	-0.183	-0.048	-0.068	-0.106	-0.092	-0.169	
Rule of Law	0.239	0.239	0.240	0.240	0.144	0.144	-0.011	-0.011	-0.053	0.017	-0.122	-0.253	-0.262	-0.288	-0.192	-0.157	-0.215	-0.206	-0.248	
Cont. Corrupt.	0.327	0.327	0.409	0.409	-0.028	-0.028	-0.176	-0.176	-0.210	-0.081	-0.298	-0.404	-0.323	-0.380	-0.309	-0.175	-0.397	-0.437	-0.356	
Status Ind.									5.210			4.620		4.650		4.470		4.500		4.520
HDI	0.557		0.582			0.526		0.600			0.569	0.648	0.654	0.588		0.603	0.612	0.614	0.617	
Glob. Peace Index														1.820	1.856	1.850	1.848	1.889	1.897	1.915
Social Cap.															0.80	2.53	2.35	1.09	-0.97	-0.98
Personal Freed.															-1.080	-2.540	-2.970	-1.050	-0.869	-1.470
Safety & Security															-1.100	-0.870	-1.050	-0.910	-1.143	-0.646

APPENDIX II: CORRELATIONS

		CPI	KEI	KI	AYS	EPI	Failed State	GII	Voice Acc.
CPI	Corrélation de Pearson	1	,327	-1,000*	,522*	,793**	-,766*	,808*	-,065
	Sig. (bilatérale)		,673	,020	,038	,001	,016	,015	,817
	N	16	4	3	16	14	9	8	15
KEI	Corrélation de Pearson	,327	1	,916	-,805	-,634	,345	,883	,929*
	Sig. (bilatérale)	,673		,084	,101	,366	,776	,311	,022
	N	4	5	4	5	4	3	3	5
KI	Corrélation de Pearson	-1,000*	,916	1	-,856	-,581	-1,000**	-1,000**	,713
	Sig. (bilatérale)	,020	,084		,144	,606			,287
	N	3	4	4	4	3	2	2	4
AYS	Corrélation de Pearson	,522*	-,805	-,856	1	,659**	-,384	,776*	-,810**
	Sig. (bilatérale)	,038	,101	,144		,008	,307	,024	,000
	N	16	5	4	20	15	9	8	19
EPI	Corrélation de Pearson	,793**	-,634	-,581	,659**	1	-,871**	,624	-,412
	Sig. (bilatérale)	,001	,366	,606	,008		,002	,098	,144
	N	14	4	3	15	15	9	8	14
Failed State	Corrélation de Pearson	-,766*	,345	-1,000**	-,384	-,871**	1	-,641	-,144
	Sig. (bilatérale)	,016	,776		,307	,002		,087	,734
	N	9	3	2	9	9	9	8	8
GII	Corrélation de Pearson	,808*	,883	-1,000**	,776*	,624	-,641	1	,643
	Sig. (bilatérale)	,015	,311		,024	,098	,087		,119
	N	8	3	2	8	8	8	8	7
Voice Acc.	Corrélation de Pearson	-,065	,929*	,713	-,810**	-,412	-,144	,643	1
	Sig. (bilatérale)	,817	,022	,287	,000	,144	,734	,119	
	N	15	5	4	19	14	8	7	19
P. Stability	Corrélation de Pearson	-,216	,679	,322	-,711**	-,433	,561	,149	,876**
	Sig. (bilatérale)	,440	,208	,678	,001	,122	,148	,750	,000
	N	15	5	4	19	14	8	7	19
Gov. Effectiv	Corrélation de Pearson	,275	,781	,321	-,563*	,160	-,216	,678	,757**
	Sig. (bilatérale)	,321	,119	,679	,012	,584	,608	,094	,000
	N	15	5	4	19	14	8	7	19
Reg. Quality	Corrélation de Pearson	,104	,201	-,529	-,116	,040	,612	,015	,382
	Sig. (bilatérale)	,712	,746	,471	,636	,893	,107	,975	,106
	N	15	5	4	19	14	8	7	19
Rule of Law	Corrélation de Pearson	-,290	,902*	,710	-,918**	-,562*	,569	,023	,900**
	Sig. (bilatérale)	,295	,037	,290	,000	,036	,141	,961	,000
	N	15	5	4	19	14	8	7	19
Status Ind.	Corrélation de Pearson	-,423	-1,000**	1,000**	-,938**	-,356	-,070	-,360	-,781
	Sig. (bilatérale)	,403			,006	,489	,911	,640	,119
	N	6	2	2	6	6	5	4	5
HDI	Corrélation de Pearson	,156	-,695	-,321	,537	,368	,046	-,026	-,523
	Sig. (bilatérale)	,667	,193	,679	,072	,295	,922	,961	,081
	N	10	5	4	12	10	7	6	12
Cont. Corrupt.	Corrélation de Pearson	-,325	,891*	,887	-,871**	-,462	,369	-,628	,908**
	Sig. (bilatérale)	,237	,043	,113	,000	,097	,368	,131	,000
	N	15	5	4	19	14	8	7	19
Glob. Peace Index	Corrélation de Pearson	,918**	1,000**	-1,000**	,612	,798*	-,665	,765*	,718
	Sig. (bilatérale)	,004			,144	,031	,103	,045	,108
	N	7	2	2	7	7	7	7	6
Social Cap.	Corrélation de Pearson	-,786	. ^a	. ^a	,001	-,911*	,851*	-,489	-,034
	Sig. (bilatérale)	,064			,999	,011	,031	,325	,957
	N	6	1	1	6	6	6	6	5
Personal Freed.	Corrélation de Pearson	,655	. ^a	. ^a	-,325	,459	-,409	,177	,227
	Sig. (bilatérale)	,158			,529	,360	,420	,738	,714
	N	6	1	1	6	6	6	6	5
Safety & Security	Corrélation de Pearson	,347	. ^a	. ^a	,390	,230	-,238	,180	,545
	Sig. (bilatérale)	,500			,445	,661	,649	,733	,342
	N	6	1	1	6	6	6	6	5

		P. Stability	Gov. Effectiv	Reg. Quality	Rule of Law	Status Ind.	HDI	Cont. Corrupt.
CPI	Corrélation de Pearson	-,216	,275	,104	-,290	-,423	,156	-,325
	Sig. (bilatérale)	,440	,321	,712	,295	,403	,667	,237
	N	15	15	15	15	6	10	15
KEI	Corrélation de Pearson	,679	,781	,201	,902*	-1,000**	-,695	,891*
	Sig. (bilatérale)	,208	,119	,746	,037		,193	,043
	N	5	5	5	5	2	5	5
KI	Corrélation de Pearson	,322	,321	-,529	,710	1,000**	-,321	,887
	Sig. (bilatérale)	,678	,679	,471	,290		,679	,113
	N	4	4	4	4	2	4	4
AYS	Corrélation de Pearson	-,711**	-,563*	-,116	-,918**	-,938**	,537	-,871**
	Sig. (bilatérale)	,001	,012	,636	,000	,006	,072	,000
	N	19	19	19	19	6	12	19
EPI	Corrélation de Pearson	-,433	,160	,040	-,562*	-,356	,368	-,462
	Sig. (bilatérale)	,122	,584	,893	,036	,489	,295	,097
	N	14	14	14	14	6	10	14
Failed State	Corrélation de Pearson	,561	-,216	,612	,569	-,070	,046	,369
	Sig. (bilatérale)	,148	,608	,107	,141	,911	,922	,368
	N	8	8	8	8	5	7	8
GII	Corrélation de Pearson	,149	,678	,015	,023	-,360	-,026	-,628
	Sig. (bilatérale)	,750	,094	,975	,961	,640	,961	,131
	N	7	7	7	7	4	6	7
Voice Acc.	Corrélation de Pearson	,876**	,757**	,382	,900**	-,781	-,523	,908**
	Sig. (bilatérale)	,000	,000	,106	,000	,119	,081	,000
	N	19	19	19	19	5	12	19
P. Stability	Corrélation de Pearson	1	,796**	,530*	,805**	,110	-,424	,829**
	Sig. (bilatérale)		,000	,020	,000	,861	,169	,000
	N	19	19	19	19	5	12	19
Gov. Effectiv	Corrélation de Pearson	,796**	1	,656**	,709**	-,122	-,291	,730**
	Sig. (bilatérale)	,000		,002	,001	,845	,359	,000
	N	19	19	19	19	5	12	19
Reg. Quality	Corrélation de Pearson	,530*	,656**	1	,234	-,912*	-,052	,256
	Sig. (bilatérale)	,020	,002		,335	,031	,872	,290
	N	19	19	19	19	5	12	19
Rule of Law	Corrélation de Pearson	,805**	,709**	,234	1	,682	-,723**	,941**
	Sig. (bilatérale)	,000	,001	,335		,205	,008	,000
	N	19	19	19	19	5	12	19
Status Ind.	Corrélation de Pearson	,110	-,122	-,912*	,682	1	,102	,387
	Sig. (bilatérale)	,861	,845	,031	,205		,898	,520
	N	5	5	5	5	6	4	5
HDI	Corrélation de Pearson	-,424	-,291	-,052	-,723**	,102	1	-,574
	Sig. (bilatérale)	,169	,359	,872	,008	,898		,051
	N	12	12	12	12	4	12	12
Cont. Corrupt.	Corrélation de Pearson	,829**	,730**	,256	,941**	,387	-,574	1
	Sig. (bilatérale)	,000	,000	,290	,000	,520	,051	
	N	19	19	19	19	5	12	19
Glob. Peace Index	Corrélation de Pearson	,196	,892*	,067	,202	-,580	,880*	-,219
	Sig. (bilatérale)	,709	,017	,900	,701	,420	,049	,677
	N	6	6	6	6	4	5	6
Social Cap.	Corrélation de Pearson	,898*	-,333	,634	,750	-,976	-,787	,328
	Sig. (bilatérale)	,038	,584	,251	,144	,139	,213	,590
	N	5	5	5	5	3	4	5
Personal Freed.	Corrélation de Pearson	-,784	,455	-,220	-,430	,774	,666	-,310
	Sig. (bilatérale)	,117	,441	,722	,470	,436	,334	,612
	N	5	5	5	5	3	4	5
Safety & Security	Corrélation de Pearson	,402	,421	,458	,737	,711	-,741	,315
	Sig. (bilatérale)	,503	,480	,437	,155	,496	,259	,606
	N	5	5	5	5	3	4	5

		Glob. Peace Index	Social Cap.	Personal Freed.	Safety & Security
CPI	Corrélation de Pearson	,918**	-,786	,655	,347
	Sig. (bilatérale)	,004	,064	,158	,500
	N	7	6	6	6
KEI	Corrélation de Pearson	1,000**	. ^a	. ^a	. ^a
	Sig. (bilatérale)
	N	2	1	1	1
KI	Corrélation de Pearson	-1,000**	. ^a	. ^a	. ^a
	Sig. (bilatérale)
	N	2	1	1	1
AYS	Corrélation de Pearson	,612	,001	-,325	,390
	Sig. (bilatérale)	,144	,999	,529	,445
	N	7	6	6	6
EPI	Corrélation de Pearson	,798*	-,911*	,459	,230
	Sig. (bilatérale)	,031	,011	,360	,661
	N	7	6	6	6
Failed State	Corrélation de Pearson	-,665	,851*	-,409	-,238
	Sig. (bilatérale)	,103	,031	,420	,649
	N	7	6	6	6
GII	Corrélation de Pearson	,765*	-,489	,177	,180
	Sig. (bilatérale)	,045	,325	,738	,733
	N	7	6	6	6
Voice Acc.	Corrélation de Pearson	,718	-,034	,227	,545
	Sig. (bilatérale)	,108	,957	,714	,342
	N	6	5	5	5
P. Stability	Corrélation de Pearson	,196	,898*	-,784	,402
	Sig. (bilatérale)	,709	,038	,117	,503
	N	6	5	5	5
Gov. Effectiv	Corrélation de Pearson	,892*	-,333	,455	,421
	Sig. (bilatérale)	,017	,584	,441	,480
	N	6	5	5	5
Reg. Quality	Corrélation de Pearson	,067	,634	-,220	,458
	Sig. (bilatérale)	,900	,251	,722	,437
	N	6	5	5	5
Rule of Law	Corrélation de Pearson	,202	,750	-,430	,737
	Sig. (bilatérale)	,701	,144	,470	,155
	N	6	5	5	5
Status Ind.	Corrélation de Pearson	-,580	-,976	,774	,711
	Sig. (bilatérale)	,420	,139	,436	,496
	N	4	3	3	3
HDI	Corrélation de Pearson	,880*	-,787	,666	-,741
	Sig. (bilatérale)	,049	,213	,334	,259
	N	5	4	4	4
Cont. Corrupt.	Corrélation de Pearson	-,219	,328	-,310	,315
	Sig. (bilatérale)	,677	,590	,612	,606
	N	6	5	5	5
Glob. Peace Index	Corrélation de Pearson	1	-,882*	,644	,462
	Sig. (bilatérale)		,020	,168	,356
	N	7	6	6	6
Social Cap.	Corrélation de Pearson	-,882*	1	-,758	-,144
	Sig. (bilatérale)	,020		,081	,786
	N	6	6	6	6
Personal Freed.	Corrélation de Pearson	,644	-,758	1	-,120
	Sig. (bilatérale)	,168	,081		,821
	N	6	6	6	6
Safety & Security	Corrélation de Pearson	,462	-,144	-,120	1
	Sig. (bilatérale)	,356	,786	,821	
	N	6	6	6	6

*. Correlation significant at 0.05

** . Correlation significant at 0.01

a. No result