Twenty years of research on Social Capital – picking up the common dimensions

The confusing discussion on Social Capital for around four decades brought up different concepts to both understanding and measuring Social Capital. These concepts are built on different dimensions that cause different ways of measurement. Let's start by having a look at the major dimensions offered:

Table 1: Dimensions of Social Capital: trust appearing in all concepts

Networks	**Trust**	**Norms and Values**

Source: van Deth 2003, p. 83

Groups and Networks	**Trust and Solidarity**	**Collective Action and Cooperation**	**Information and Communication**	**Social Cohesion and Inclusion**	**Empowerment and Political Action**

Source: World Bank, SOCAT (Social Capital Assessment Tool) 2004

Personal Relationships	**Social Network Support**	**Civic engagement**	**Trust and cooperative norms**

Source: OECD 2013

Charitable Intent	**Family Bonds**	**Trust**

Source: Legatum Prosperity Index 2014, p. 29/30

Social Climate	**Trust**	**Societal solidarity**	**Helpfulness**	**Friendliness**	**Hospitality**

Source: World Social Capital Monitor, 2017

Strenghten the role of empirical evidence – multi-method approaches

While social networks create what is called *bonding* Social Capital, this dimension since Robert Putnam (Putnam 1995) has been measured by aggregated data on voluntarism and other accountable forms of social connections that can be operationalized by quantitative data.
Of course qualitative statements on all dimension of Social Capital have often been considered in many studies – despite the fact that Joseph Stiglitz (Stiglitz 1999) called Social Capital to being 'a tacit knowledge'. According to Jan van Deth (van Deth 2003) the measurement of Social Capital is characterized by several orthodoxies restricted to the use of official statistics. Van Deth's resume: 'What is urgently needed, then, is the use of multi-method and multi-level strategies in order to strengthen the role of empirical evidence in debates on social capital and citizenship.' (van Deth 2003).

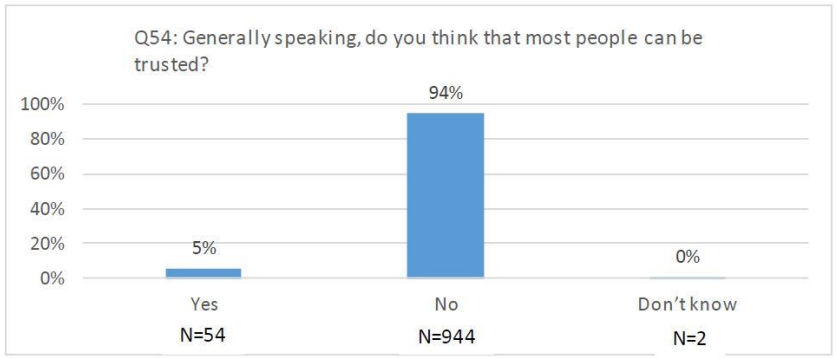
Although this didn't happen the Social Capital Initiative of the World Bank has been disbanded in 2004 yet and no bigger efforts have been made for a new attempt to including empirical methods.
In 2007 the iPhone appeared on the market and more than a billion citizens had access to the internet. Empirical research, formerly done (World Bank 2000, 2004) by 27-pages household questionnaires and individual interviews taking two hours each, could now being conducted through the internet and the mobile in a few minutes.
So when the Basel Institute of Commons and Economics started to assessing Social Capital in 2010, research designs could be tested much easier and cheaper than ever before.
And it became possible for the first time in history to offer open access, anonymity and place for qualitative statements in 35 languages.

But these new opportunities coming up with consumer electronics as well allowed new approaches for research design: while the SOCAT of the World Bank (World Bank 2000, 2004) *started* by defining around 100 correlation items defined by high-level researchers, the World Social Capital Monitor started the reverse way: trying out a few indicators even in poor rural areas, among illiterates and of course in regions of conflict.

The new big role of average deviation

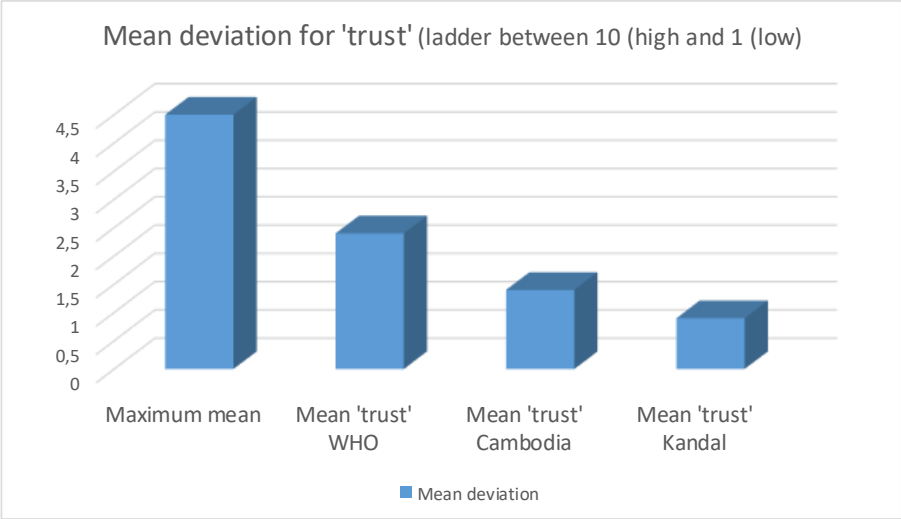
The two most recommended surveys, the Gallup World Poll (GWP, Gallup 2008) and the World Values Survey (WVS, WVS 2012) today are the only empirical database for social perceptions worldwide.
It is surprising to learn, that both surveys assess e.g. trust not by the use of a ladder – which would allow to measuring a precise average deviation – but with a binary question:

6.2 Trust: General



These results from Cambodia (Asia Foundation 2014) have been tested by the World Social Capital Monitor in Cambodia in 2016 by using the question: *How would you estimate the trust among the people at your place at a ladder between 10 (high) and 1 (low)?*

The surprising result (n=1733) across Cambodia for 'trust' were amazing 6.3 points and an average deviation of 1.5 (Report Cambodia 2016).
We can now comparing the average deviation for the mean for trust on the same ladder (WHO 2012), the maximum deviation (4.5) and of course the deviations for all of the 24 provinces of Cambodia, in this case one of the poorest provinces which is Kandal:



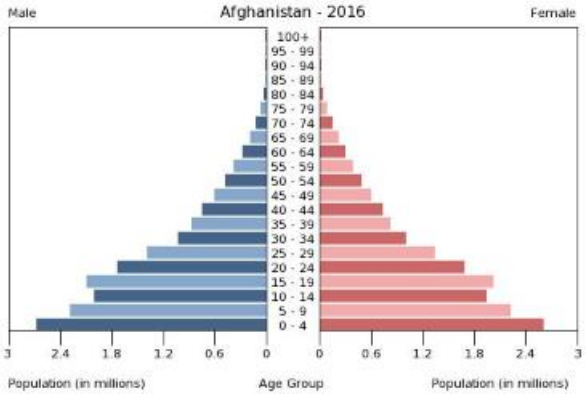
Source: WHO 2012, Asia Foundation 2014, World Social Capital Monitor 2016

Of course the general expectation – especially reclaimed by colleague scientists – is that the mean for trust will depend on the personal condition of the respondent such as age, sex, income, education, religion and other correlation factors. This assumption could easily being verified in Cambodia where in the meanwhile 3400 respondents scored on trust in 24 regions: is there any sample – small or big – where the average deviation is significantly higher so that we may expect sociodemographic factors entirely changing the mean for 'trust'?

The call for representativity

Up to recent failures of representative polls in case of the British 'Brexit' and the election of Donald Trump, representativity became a synonym for credibility and legitimacy. And it was a strong argument against any grassroot or citizen science approaches: not offering representativity will question and devaluate any empirical research.
In the framework of the 17 UN SDG e.g. 1 (Overcoming Poverty), 11 (Sustainable Cities) and 16 (Peace) the call for representativity brings up a couple of challenges:

- National panels such as of GWP and WVS can't provide local and regional results.
- In countries of conflict and/or big differences between regions, e.g. the 34 regions of Afghanistan, representativity can't provide valid national results on trust and other interpersonal social perceptions and values or only results without a local application for the SDG.
- In areas of conflict most of the active members of conflicting parties are males between 20 and 40 years. This group is relatively limited within a representative panel and at the same time can't be reached through non-anonymous household interviews.



The methodological decision

To preferring open access, local results and anonymity to representativity is a methodological decision. It will not exclude the possibility, that representative surveys with the same questions will create different results. But the results of the World Social Capital Monitor can't pretend to being representative in any case.
So what are the alternatives to creating credibility and acceptance of the results?

First open access itself creates an incentive to becoming a stakeholder and being part of a democratic process: less and less citizens as well in developing countries do not accept to being presented by proxies anymore. So citizen based data can always attend more consideration than aggregated data.
Second less questions and items allow to 'leaving no one behind', which is the motto of the UN Goals. Therefore we still have results in 35 languages and from 142 countries.
Third new technologies allow a validation as well by IP address, patterns, moment, language chosen, percentage of qualitative answers and percentage giving their mail address.

A note on methodology: worldwide comparison by mean and average deviation

The World Social Capital Monitor is assessing eight social goods by using a ladder between 10 (high/excellent) and one (low/poor) online and mobile. This approach allows to comparing not only all kinds of sample groups (randomized, affiliated, online, mobile, through group interviews), but as well by countries, regions and towns – and as well by average deviation. Here we show the World's first comparison of mean and average deviation within open access samples:

Table 2: six countries compared by mean and average deviation

	Cambodia	Ghana	Afghanistan	Pakistan	Germany	Switzerland	Mean
Social Climate	**7.0**	**4.6**	**5.6**	**5.6**	**7.0**	**7.8**	**6.3**
	1.4	**1.4**	**1.6**	**1.8**	**1.1**	**0.8**	**1.4**
Trust	**6.3**	**4.2**	**5.2**	**5.8**	**6.3**	**7.0**	**5.6**
	1.5	**1.3**	**2.0**	**1.9**	**1.8**	**0.8**	**1.6**
Austerity Measures	**5.8**	**4.1**	**5.0**	**5.9**	**5.8**	**6.2**	**5.5**
	1.8	**1.7**	**1.9**	**1.8**	**1.6**	**1.6**	**1.7**
Taxes	**6.3**	**5.0**	**5.5**	**5.2**	**7.2**	**7.5**	**6.1**
	1.8	**1.3**	**2.2**	**2.0**	**1.5**	**1.3**	**1.7**
Invest in SME	**4.8**	**5.6**	**5.5**	**5.6**	**5.7**	**7.8**	**5.8**
	2.0	**1.3**	**2.1**	**2.0**	**1.7**	**1.7**	**1.8**
Helpfulness	**7.2**	**6.0**	**5.9**	**6.6**	**7.0**	**6.8**	**6.6**
	1.6	**0.9**	**1.8**	**2.0**	**1.3**	**1.1**	**1.5**
Friendliness	**7.5**	**7.6**	**6.2**	**7.0**	**6.5**	**6.7**	**6.9**
	1.4	**1.0**	**1.7**	**1.6**	**1.5**	**0.8**	**1.3**
Hospitality	**6.4**	**6.0**	**7.5**	**7.9**	**6.0**	**5.9**	**6.6**
	1.5	**1.4**	**1.8**	**1.7**	**1.3**	**1.3**	**1.5**

Source: World Social Capital Monitor 2016, ladder between 10 (high) and 1 (low)

First observations:

- The most difficult question – Please estimate the social climate at your place – shows an astonishing low deviation of 1.4 only in average. People seem to feel and share their *Social Weather.*
- An average closer to the mean e.g. 'taxes' in Pakistan (score 5.2) does not lower the average deviation. E.g.: the lowest deviation (score 0.8) can be found in the highest single average score of 7.8 in Switzerland which is 2.8 away from the mean.
- As can be shown in the analysis of Cambodia both average score and average deviation do not depend on the size of the sample.
- The low mean for the acceptance of austerity measures is a worldwide phenomenon.
- The national profile of the Social Capital is defined by the different scores for the eight indicators. e.g.: Germany's major social asset (score 7.2) is to paying taxes, Afghanistan and Pakistan score with hospitality (scores 7.5 and 7.9) while Cambodia, Ghana and Pakistan share their strengths in friendliness.
- A mediocre social climate (4.6 in Ghana) does at the same time allow the highest score on friendliness (7.6).
- The low average deviation across all indicators and countries may being explained by the nature of the questions: they bring the respondent in the position of a social scientist observing his own society. Subjectivity is replaced by sociability.

Table 3: Creating timelines by town, region and country

In Cambodia the World Social Capital Monitor started in December 2015. That allows to review first timelines for the capital Phnom Penh and the province of Kandal and comparing both with entire Cambodia.

	Phnom Penh		Kandal		Cambodia	
	half year I	half year II	half year I	half year II	half year I	half year II
Social Climate	6.5	6.6	7.2	6.8	6.9	6.9
	1.3	1.5	1.2	1.2	1.4	1.4
Trust	5,9	5.9	6.8	5.9	6.4	6.3
	1.4	1.6	1.5	1.3	1.5	1.5
Austerity Measures	5.7	5.5	5.7	5.7	5.8	5.8
	1.7	1.8	1.5	1.4	1.8	1.8
Taxes	5.9	6.1	6.2	6.1	6.3	6.3
	1.7	1.8	1.5	1.5	1.8	1.8
Invest in SME	4.7	4.5	4.5	4.4	4.6	4.8
	1.7	2.1	1.7	1.8	1.8	2.0
Helpfulness	6.9	6.7	7.5	6.8	7.3	7.1
	1.4	1.6	1.3	1.5	1.5	1.6
Friendliness	7.1	7.0	7.9	7.3	7.6	7.6
	1.3	1.7	1.1	1.4	1.3	1.5
Hospitality	6.1	6.3	6.8	6.0	6.5	6.4
	1.2	1.7	1.1	1.5	1.4	1.5
Panel size	**n=173**	**n=200**	**n=86**	**n=121**	**n=424**	**n=1300**

Source: Social Capital Monitor Cambodia 2016, Pannasastra University of Cambodia

Analysis: alert, forecast and benchmark

While the Social Capital across Cambodia remains extremely stable, a small increase of the average deviation can be considered. In opposite to the national stability, Kandal, one of Cambodia's poorest provinces had significant lower scores in 7 of the 8 indicators over the biannual timeline. The increase of the average deviation in all three timelines from the first to the second half year is too slow to be interpreted as a general trend yet. By comparing the Social Capital patterns of countries and considering the average deviation (table 3) three types of analysis can be defined:

Alert	The mean of a single indicator increases or decreases >0.5 points The average deviation increases or decreases >0.4 points	Example: trust and hospitality in Kandal Example: hospitality in Phnom Penh
Forecast	Considering the biannual change/stability of both mean and deviation for a biannual forecast	Example: forecast for Cambodia in 2017 is stability in all eight indicators
Benchmark	Creating benchmarks at a national and international level With a score of 7.6 Cambodia is among the countries with the highest friendliness worldwide	Example: Kandal with 7.9 is Cambodia's benchmark for friendliness

Overcoming the psychological bias: testing big vs. small samples

Empirical research and its results influence our personal perceptions, decisions, politics and the economy. The idea of the crowd's wisdom – which is an instrument of market forecasts as well as of public choice – implies a quantitative idea of a valid crowd. Tens? Hundreds? Thousands?

On September 25th 2017 a score from the United States within our monitor achieved our attention:

post_code: 32713
town: DeBary (Florida)
email: xxxxxxxxxxx
country: United States
say: Trust is at an all-time low in the United States.
social_climate: 7
trust: 4
austerity_measures: 2
taxes: 2
invest_savings: 4
helpfulness: 5
friendliness: 6
hospitality: 6
ip: xxxxxxxxxxxxx
time: 2017-09-25 14:40:57

Ten days later the Las Vegas massacre took place – and we may expecting that the scores for general trust in the U.S. will not having increased since then.

This sample may explain that even a single qualitative score for an entire country with 323 million inhabitants can achieve some attention and of course consideration. Such a single score can even be *representative*, which in this case only means: many respondents may spontaneously agree with this score by a low deviation.
In Cambodia we could comparing a randomized (online and mobile) set of 6 scores for the province of Pursat and a group interview of 11 participants in Kandal with our bigger samples. While the average deviation decreased in the group interview, the randomized panel of only 6 respondents met the country's average.

Table 4: Comparing small and big samples in Cambodia

	Phnom Penh		**Pursat**	**Kandal**	**Cambodia**	
Social Climate	6.5	6.6	6.6	8.2	6.9	6.9
	1.3	1.5	1.3	1.2	1.4	1.4
Trust	5,9	5.9	6.8	7.9	6.4	6.3
	1.4	1.6	1.1	0.9	1.5	1.5
Austerity Measures	5.7	5.5	5.3	5.6	5.8	5.8
	1.7	1.8	1.3	1.0	1.8	1.8
Taxes	5.9	6.1	6.8	5.9	6.3	6.3
	1.7	1.8	1.5	1.2	1.8	1.8
Invest in SME	4.7	4.5	5.1	5.4	4.6	4.8
	1.7	2.1	1.5	1.4	1.8	2.0
Helpfulness	6.9	6.7	7.6	7.0	7.3	7.1
	1.4	1.6	1.4	1.3	1.5	1.6
Friendliness	7.1	7.0	8.1	7.6	7.6	7.6
	1.3	1.7	1.8	1.1	1.3	1.5
Hospitality	6.1	6.3	5.5	7.9	6.5	6.4
	1.2	1.7	1.3	0.8	1.4	1.5
Panel size	**n=173**	**n=200**	**n=6**	**n=11**	**n=424**	**n=1300**

Source: Social Capital Monitor Cambodia 2016, Pannasastra University of Cambodia

If you do an anonymous survey – how do you make sure that the answers are not manipulated?

Every score joining the SSL coded servers of the World Social Capital Monitor is meeting other scores on the same city, region or country. While looking at the different national distribution of Social Capital (Table 2) every new score entirely differing gets our attention. Is the score giving evidence for different patterns in certain towns and regions? Then we assess more scores from this place. Does the respondent give the same score for all eight indicators? Or does he score 6-6-6-6-6-8-8-8? That happens. In West Africa people divide the eight indicators in two sections: the one's they can't influence and the last three that are their social core assets. But in Germany or Switzerland such a score would express a lack of integrity. In one case the public relations director of a German city scored the social climate with 10, helpfulness and friendliness with 9. Although we had a couple of scores from the city yet, the score has been removed.

Manipulating an anonymous poll is easy, because there only the number of votes count, not the average deviation and neither the distribution of eight indicators. But in the Social Capital Assessment even single scores can give evidence for the local Social Capital. We haven't seen any collective attempt to manipulating the scores up to now, but the only successful way to doing that will be to agreeing on every single score before and then sending it from different local IP-addresses at randomized moments. So you may simulate the national or local distribution. But once you do that, your scores will not change the Social Capital Report for a country but only increasing the number of entries. Does that make any sense?

Data protection and security: a question of incentive

One of the surprising results of the World Social Capital Monitor is the percentage of respondents voluntarily giving their personal mail address: between 72 and 96 per cent have confidence that their score is not misused for advertising or political control. And they receive this kind of mail:

آپ کے جوابات سے ہمیں آپ کے ملک میں سماجی سرمائے کو بہتر طور پر سمجھنے میں مدد ملے گی

What is the incentive to hacking the database of trustyourplace.com ? Of course this is not the place to telling the extent of protection the monitor has both geographically and of course by advanced technology. One major and natural protection is the fact, that the database today is spread across 35 languages. While the names of cities and regions have to be entered in a language (and not chosen by scroll), robots do quite hard to entering the World Social Capital Monitor.

But nevertheless a secret service of a country found a way to hijacking the front-end: they copied it and installed their own databank behind. But what did they win? They have the scores and the IP-addresses of the respondents. Although our questions do not violate any political or legal restrictions even in regions of conflict, the only result is 'no match' for this region of conflict.
So a missing incentive is the best protection of our data. At the World Social Capital Monitor, all results are reviewed by a scientist and not automatically.

Expanding the data

The data gathered within the World Social Capital Monitor can currently being delivered in the following formats:

SQL

CodeGen

CSV

CSV for EXCEL

MS Word 2000

JSON

LaTex

Open Document Calculation Table

Open Document Text

PDF

PHP-Array

Texy!Text

XML

YAML

Table 5: Expanding two indicators of Social Capital in 14 Cambodian provinces with the MPI (Multidimensional Poverty Index) and the Export Sales in $ by ranks of provinces

	Social Climate	MPI Poverty Index	Friendliness	Sales in $
Banthey Meanchay	6	4	7	6
Battambang	5	2	6	4
Kampong Thom	4	13	2	12
Kampong Cham	5	10	5	3
Kampong Speu	7	6	8	8
Kampot	3	7	6	14
Kandal	6	6	9	2
Kratie	1	14	8	13
Pnomh Penh	8	1	10	1
Prey Veng	6	8	1	7
Siem Reap	4	11	3	5
Sihanouk Ville	2	5	1	10
Svay Rieng	6	9	3	11
Takeo	8	12	7	9

Sources: Kingdom of Cambodia 2013, ADB Cambodia 2014, SC Monitor 2016

Table 6: Including Social Capital in the Global Index Benchmark

The Global Index Benchmark for the first time allows to comparing the ranking of countries across 9 indices, the SDG Index and GDP PPP:

Country Name	IMF GDP per Capita PPP 2014 Rank	Human Development Index 2014 Rank	World Giving Index 2014 Rank	Happy Planet Index 2012 Rank	Corruption Perception Index 2014 Rank	Global Peace Index 2015 Rank	Global Competitiveness Index 2014/2015 Rank	Legatum Prosperity Index 2014 Rank	Social Progress Index 2015 Rank	Enabling Environment Index 2013 Rank	Bertelsmann SDGi 2017	Number of Indices	Average Rank	Average Rank Position Ranked
Switzerland	9	3		34	5	5	1	2	3	7	5	9	7,5	1
New Zealand	32	7	5	28	2	4	17	3	5	1	22	10	8,0	2
Norway	6	1		29	5	17	11	1	1	5	3	9	8,8	3
Canada	21	8	3	65	10	7	15	5	6	2	13	10	13,4	4
Netherlands	15	4	12	67	8	20	8	9	9	6	8	10	15,9	5
Australia	16	2	6	76	11	9	22	7	10	3	20	10	16,2	6
Sweden	18	12	40	52	4	13	10	6	2	9	1	10	16,4	7
Finland	26	24	25	70	3	6	4	8	7	11	4	10	17,6	8
United Kingdom	28	14	7	41	14	39	9	13	11	15	10	10	18,1	9
Germany	19	6	28	46	12	16	5	14	14	25	6	10	18,4	10
Denmark	22	10	18	110	1	2	13	4	8	4	2	10	18,9	11
Austria	17	21	17	48	23	3	21	15	13	14	7	10	19,4	12
Ireland	14	11	4	73	17	12	25	12	12	12	14	10	19,8	13
Iceland	23	13	14	88	12	1	30	11	4	8	9	10	20,1	14
Singapore	3	9		90	7	24	2	17			19	7	24,8	15
Japan	29	17	90	45	15	8	6	18	15		18	9	26,8	16
United States	11	5	1	105	17	94	3	10	16	10	25	10	29,0	17
Chile	54	41	50	19	21	29	33	31	26	21	42	10	30,1	18
Belgium	24	21	52	107	15	14	18	16	17	16	12	10	30,7	19
Spain	33	27	62	62	37	21	35	24	20	22	30	10	34,4	20

Source: http://commons.ch/wp-content/uploads/Global_Benchmark_SDG_GDP.xlsx

Searching for independent indicators for the SDG

The major finding of the Global Index Benchmark was the entire redundancy of the rankings and their indicators: as it can be seen by table 6 only countries with a strong GDP can lead the rankings in all respects including environmental issues, governance, health, security and of course as well in meeting the SDG.
That entirely changes with the consideration of Social Capital: in minimum three of the new indicators of Social Capital as well developing countries and regions in conflict and crises can identify social assets.
As Nobel laureate Elinor Ostrom (1933-2012) could show (Ostrom 1999) Social Capital has a strong impact on e.g. the water prices: the more citizens in rural villages of Nepal collaborated by non-material social goods, the lower was the final local water price in developing projects.

This effect could not being measured by an increasing GDP – in opposite lower prices and costs can diminish the local GDP!

Within the Sustainable Development Goals the outcome counts. So if Social Capital helps to achieving more security, peace and - by helpfulness and solidarity - lower transaction costs, there will be an outcome without any increase of GDP.

Expanding the eight indicators of the World Social Capital Monitor with GDP PPP, the Multidimensional Poverty Index and with other Indices such as the Human Development Index and the Social Progress Index will allow to identify new independent indicators.

They can being tested in any correlation – and they will become the first non-material indicators that are gathered by citizen's input and data.

Conclusion

The new methodological approach to supporting open access, anonymity and local results by the help of the new online and mobile technologies allows to roll out a worldwide survey within a short time.
The comparison of different panels and samples in a timeline and by mean and average deviation is the way to testing the results. The new consideration of qualitative say and small samples completes the picture given by the quantitative scores.
Through the cooperation with universities in Cambodia, Afghanistan, Bangladesh, Ghana and Italy various ways of distribution of the survey could been tested and compared yet.

To defining Social Capital by a small set of intercultural accepted indicators that can being scored on a ladder between 10 (high) and 1 (low) opens the way to a worldwide participation as well in LDC, regions of conflict and crises.

It has recently been noted (Adams 2017, Dill 2017, Verbeek 2017) that the social dimension of the SDG has to being considered as well. In 2009 yet Joseph Stiglitz (Stiglitz 2009) reclaimed Social Capital to being the 'most under-measured form of social connections'. In 2016 Costanza and Giovannini (Costanza 2016) recommended to including Social Capital in the measurement of the SDG.

The current strategy to achieving the SDG by legal commitments, audits and economic incentives therefore has to being enriched by encouraging the citizens and administrations to considering and activating their non-material goods.

This is the use and the application of Social Capital.

Links

United Nations Sustainable Development Goals Knowledge Platform
https://sustainabledevelopment.un.org/

World Social Capital Monitor at the UN SDG Partnerships:
https://sustainabledevelopment.un.org/partnership/?p=11706

World Social Capital Monitor:
https://trustyourplace.com/

World Social Capital Monitor within the UNWTO:
http://www.tourism4development2017.org/knowledge/world-social-capital-monitor/

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