

Spring Lecture 2018 : The Social Progress Index and the Sustainable Development Goals

Michael Green, Executive Director of the Social Progress Imperative

Get Involved: #IFoALecture

03 May 2018



The Social Progress Index and the Sustainable Development Goals

Prepared for: Institute and Faculty of Actuaries 23rd April, 2018



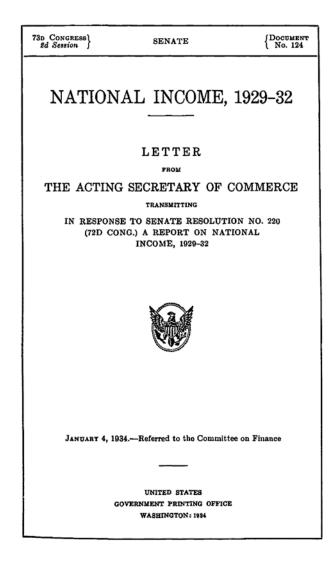
Simon Kuznets





4th January 1934: The Kuznets Report







Kuznets' Warning

CONCEPT, SCOPE, AND METHOD

7

intensity and unpleasantness of effort going into the earning of income. The welfare of a nation can, therefore, scarcely be inferred from a measurement of national income as defined above.

The abuses of national income estimates arise largely from a failure to take into account the precise definition of income and the methods of its evaluation which the estimator assumes in arriving at his final figures. Notions of productivity or welfare as understood by the user of the estimates are often read by him into the income measurement, regardless of the assumptions made by the income estimator in arriving at the figures. As a result we find all too commonly such inferences that a decline of 30 percent in the national income (in terms of "constant" dollars) means a 30 percent decline in the total productivity of the nation, and a corresponding decline in its welfare. Or that a nation whose total income is twice the size of the national income of another country is twice "as well off", can sustain payments abroad twice as large or can carry a debt burden double in size. Such statements can obviously be true only when qualified by a host of "ifs."

A similar failure to take into account the investigator's basic assumptions underlies another widely prevalent abuse of national income measures, involved in estimating the draft or "burden" which this or that particular type of expenses (e.g., government expenses, payments on bonded debt, etc.) constitutes of the country's total end-product. Every payment included in the national income is ipso facto a draft or a "burden" upon national income. For example, net receipts by physicians from medical practice, are both an addition to national income and a draft upon individual incomes from which such receipts originate. Since we estimate the value of personal services or commodities at their market value it follows that any payment for productive services contributes just as much to the national income can, therefore, be conceived as "pure" draft.

The full meaning of a statement that such payments as interest on bonds or taxes for government services are a "burden" or draft upon national income is that actually no services are being rendered in return for these payments. That an increasing weight in the national income of payments on fixed debt or of salaries of government officials is not hailed as an increased contribution to national income lies in the implicit assumption, not always true, that the services contributed by creditors or government officials have not increased proportionately, and that, therefore, a heavier burden was added upon other income recipients without an increased benefit.

Such assumptions are accepted all too easily because they are based upon a natural but erroneous identification of national income with business or personal income. From the standpoint of a business firm or person, the income of employees, private or public, is likely to appear as a draft. But from the vantage point of national economy as a whole, which is used by a national income investigator, no payment that is included in national income can be considered as a pure draft upon the country's end-product. This can be true only of payments not included, such as charity, earnings from illegal pursuits, and the like. All that the national income estimator can say is that this or the other part of the national total has increased or declined more than the others. That this rise or decline implies a larger or smaller burden upon the national economy can be established

"The welfare of a nation can, therefore, scarcely be inferred from a measurement of national income as defined above."



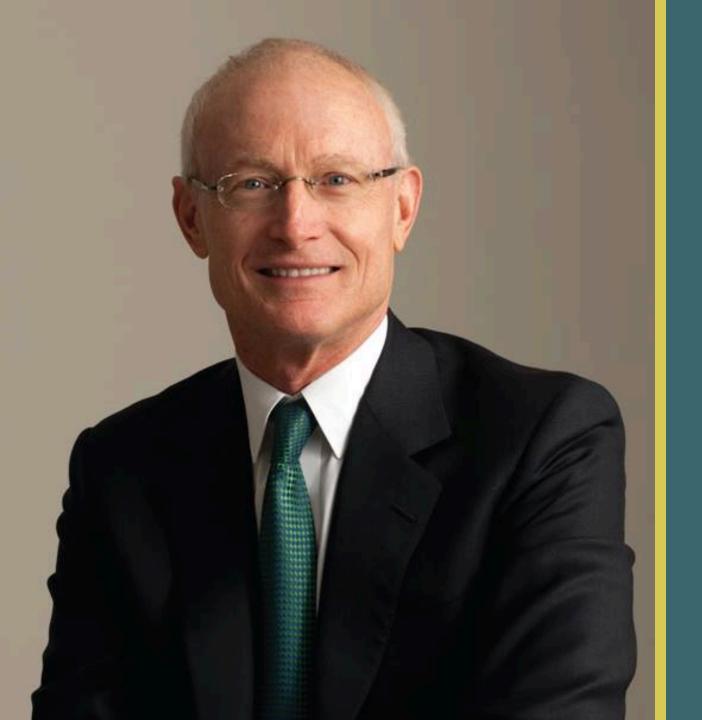
How do we advance society?



Social Progress

The factors which make up a good life for individuals and a healthy society





"Economic growth alone is not sufficient to advance societies and improve the quality of life of citizens.

True success, and growth that is inclusive requires achieving both economic and social progress."

Social Progress Imperative
 Advisory Board Chair
 Michael E. Porter



Social Progress Index



The Social Progress Index design principles





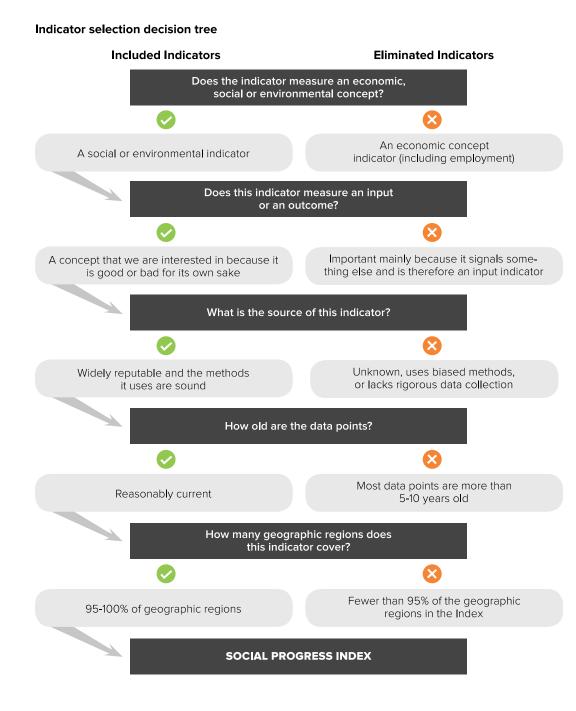
The Social Progress framework answers universally important questions

SOCIAL PROGRESS INDEX

Basic Human Needs	Foundations of Wellbeing	Opportunity
Nutrition and Basic Medical Care	Access to Basic Knowledge	Personal Rights
Do people have enough food to eat and are they receiving basic medical care?	Do people have the educational foundations to improve their lives?	Are people free of restrictions on their rights?
Water and Sanitation	Access to Info & Communications	Personal Freedom and Choice
Can people drink water and keep themselves clean without getting sick?	Can people freely access ideas and information from anywhere in the world?	Are people free of restrictions on their personal decisions?
Shelter	Health and Wellness	Tolerance and Inclusion
Do people have adequate housing with basic utilities?	Do people live long and healthy lives?	ls no one excluded from the opportunity to be a contributing member of society?
Personal Safety	Environmental Quality	Access to Advanced Education
Are people able to feel safe?	<i>Is this society using its resources so they will be available to future generations?</i>	Do people have the opportunity to achieve high levels of education?



The Social Progress Index uses the best available social outcome indicators that are current and relevant to all countries





The Social Progress Index is designed to reflect a **broad consensus** about what a healthy, successful society looks like in the 21st century.

The global index includes data from 128 countries on 50 indicators of social and environmental outcomes

Social Progress Index indicator-level framework

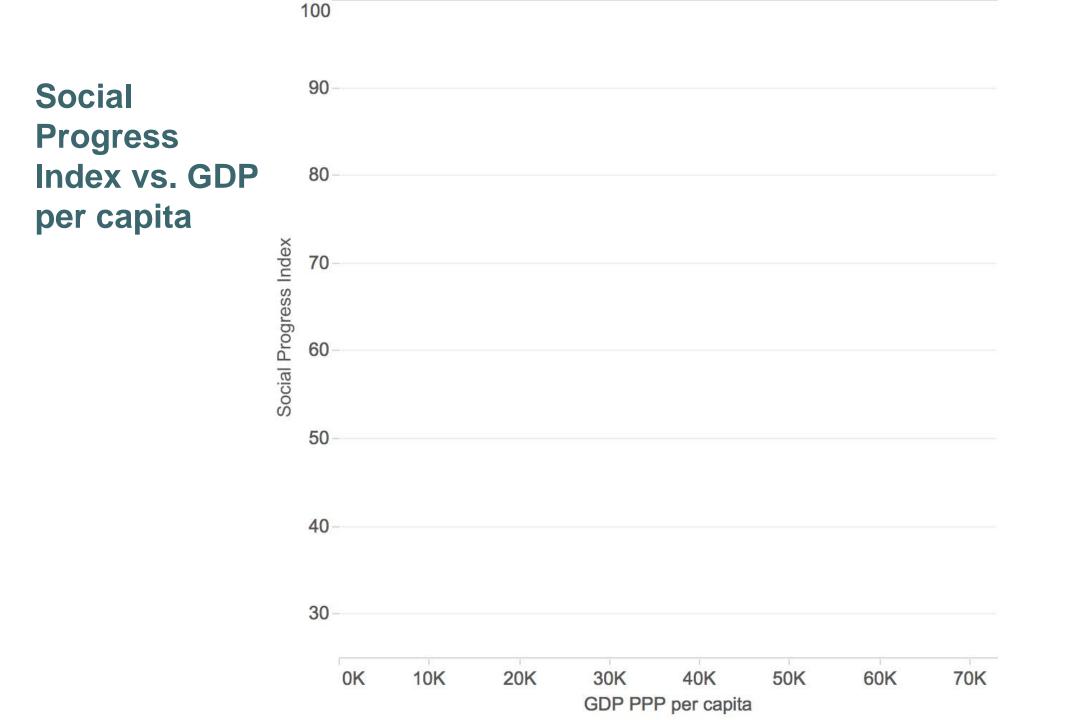
Basic Human Needs	Foundations of Wellbeing	Opportunity
Nutrition and Basic Medical Care	Access to Basic Knowledge	Personal Rights
Jndernourishment	Adult literacy rate	Political rights
Depth of food deficit	Primary school enrollment	Freedom of expression
Maternal mortality rate	Secondary school enrollment	Freedom of assembly
Child mortality rate	Gender parity in secondary	Private property rights
Deaths from infectious diseases	enrollment	Personal Freedom and Choice
Water and Sanitation	Access to Information and	Freedom over life choices
Access to piped water	Communications	Freedom of religion
Rural access to improved water	Mobile telephone subscriptions	Early marriage
source	Internet users	Satisfied demand for contraception
Access to improved sanitation	Press Freedom Index	Corruption
facilities	Health and Wellness	Tolerance and Inclusion
Shelter	Life expectancy at 60	Tolerance for immigrants
Availability of affordable housing	Premature deaths from non-	Tolerance for homosexuals
Access to electricity	communicable diseases	Discrimination and violence
Quality of electricity supply	Suicide rate	against minorities
Household air pollution attributable	Environmental Quality	Religious tolerance
deaths	Outdoor air pollution attributable	Community safety net
Personal Safety	deaths	Access to Advanced Education
Homicide rate	Wastewater treatment	Years of tertiary schooling
_evel of violent crime	Biodiversity and habitat	Women's average years in school
Perceived criminality	Greenhouse gas emissions	Inequality in the attainment of
Political terror		education
Traffic deaths		Globally ranked universities
		Percentage of tertiary students enrolled in globally ranked universities



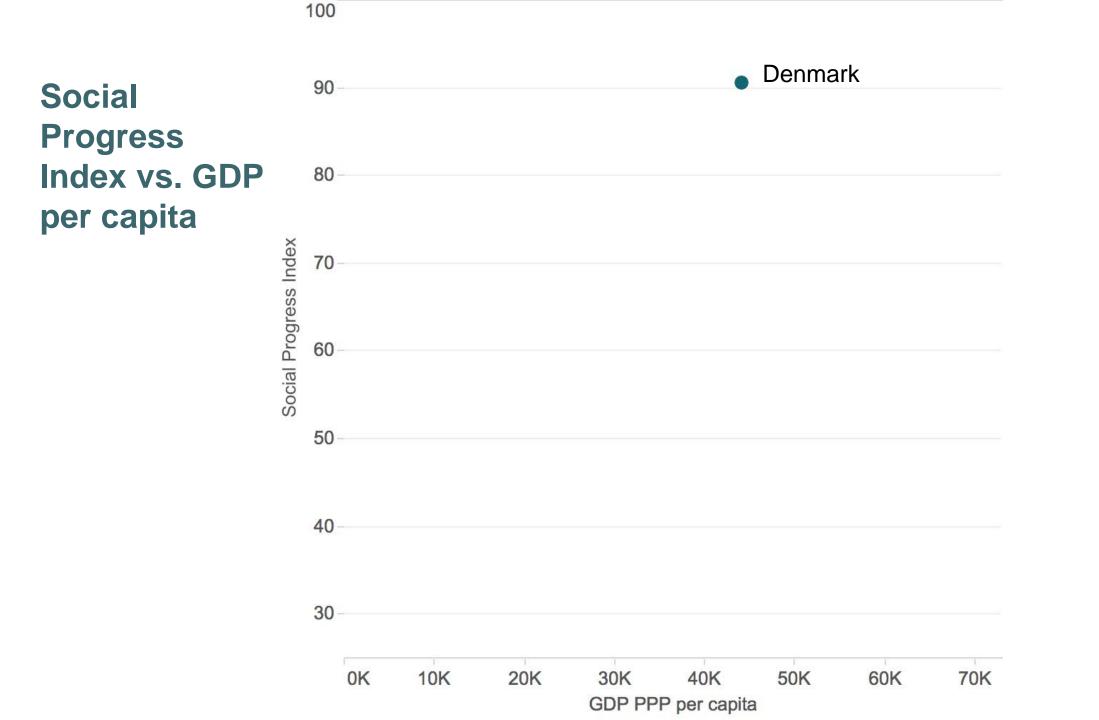
Calculating the index

- Within each component, indicator weights are determined using Principal Component Analysis (PCA).
- The use of **PCA corrects for the overlapping concepts** and statistical features between indicators.
- All 12 components of the index are **equally weighted.**

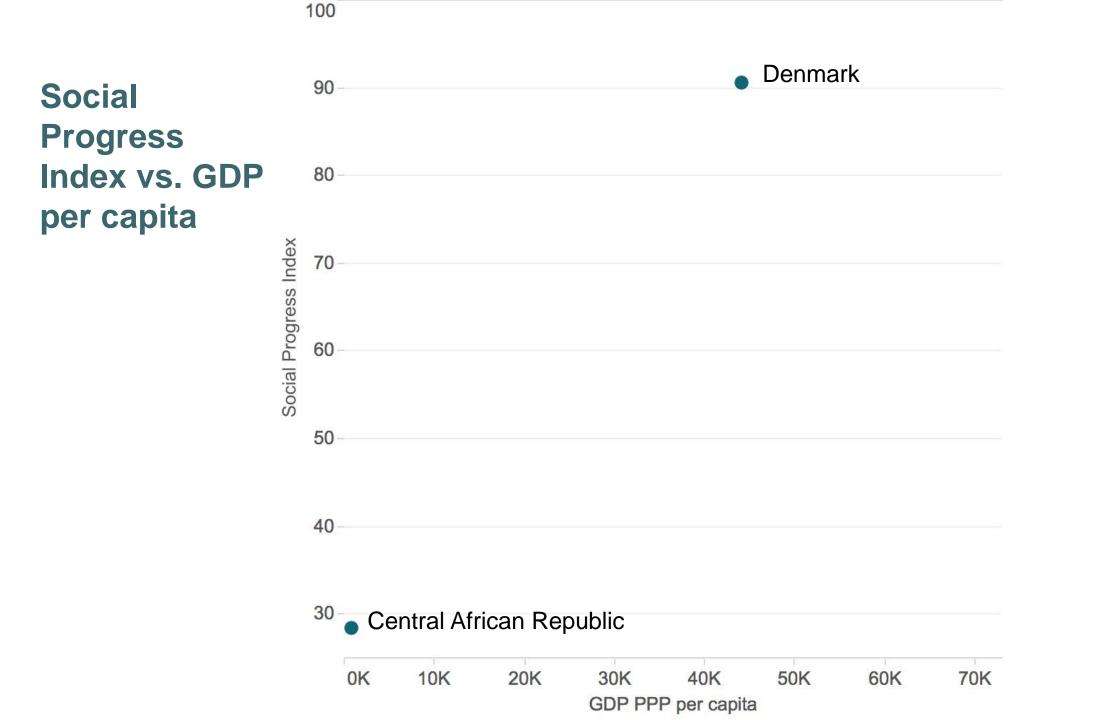




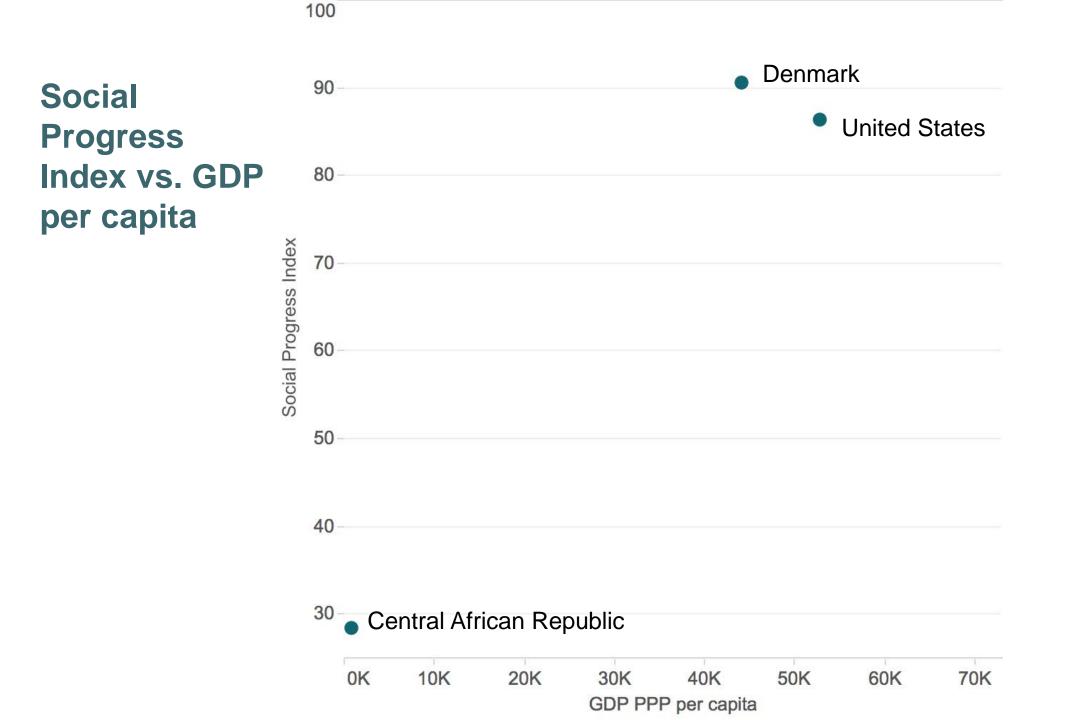




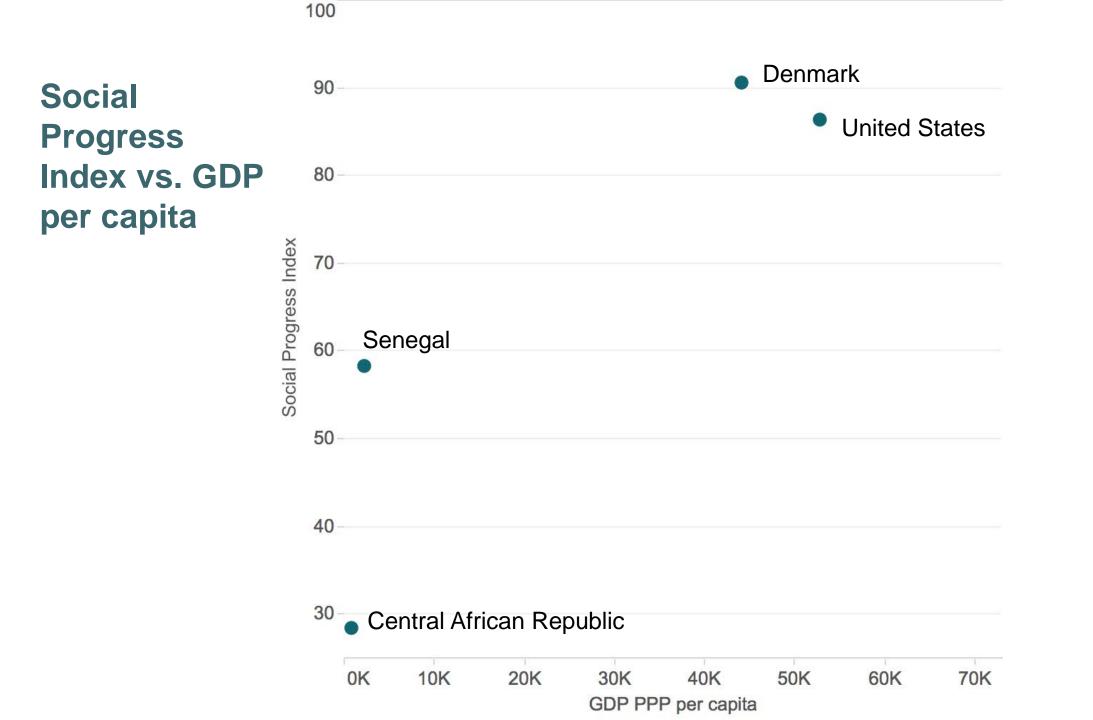






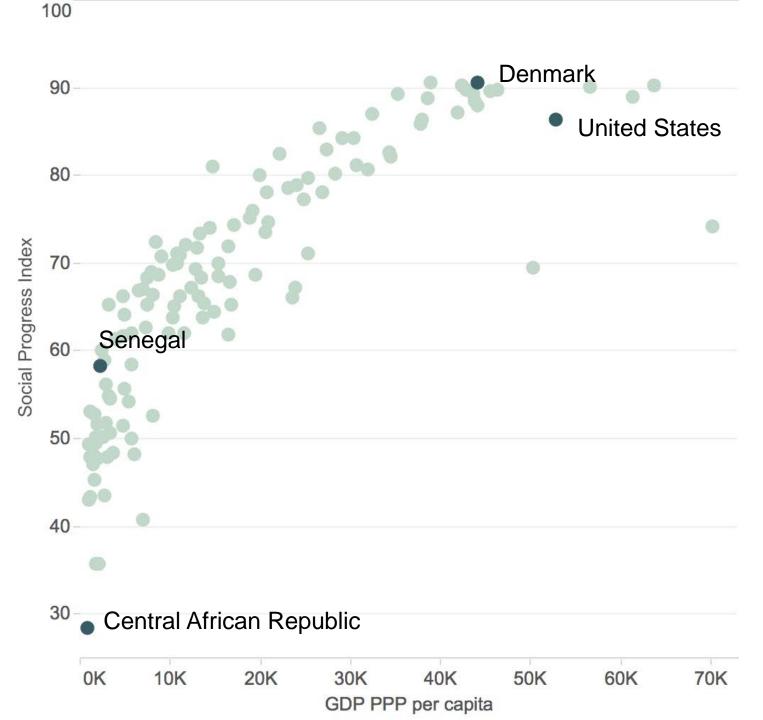




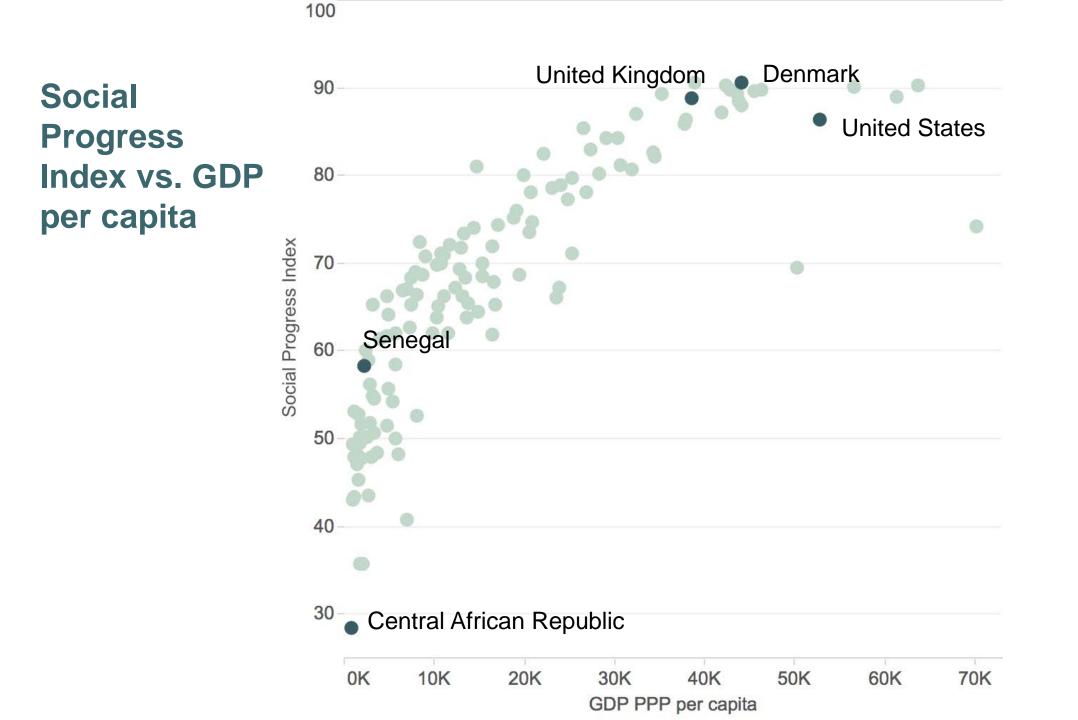




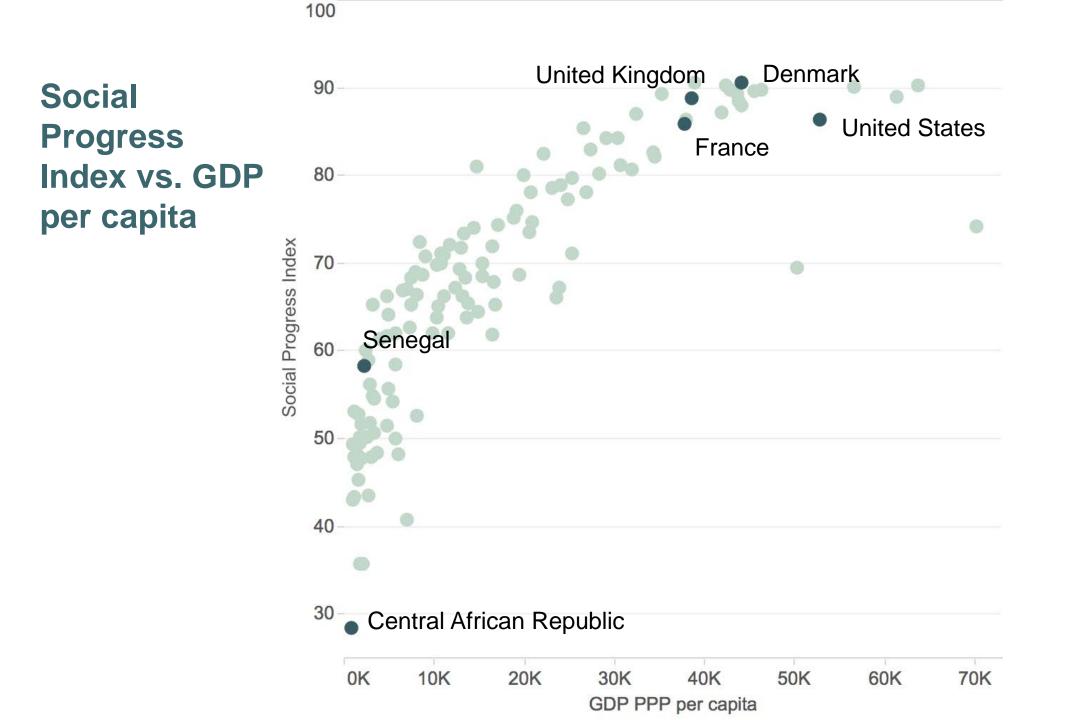
Social Progress Index vs. GDP per capita



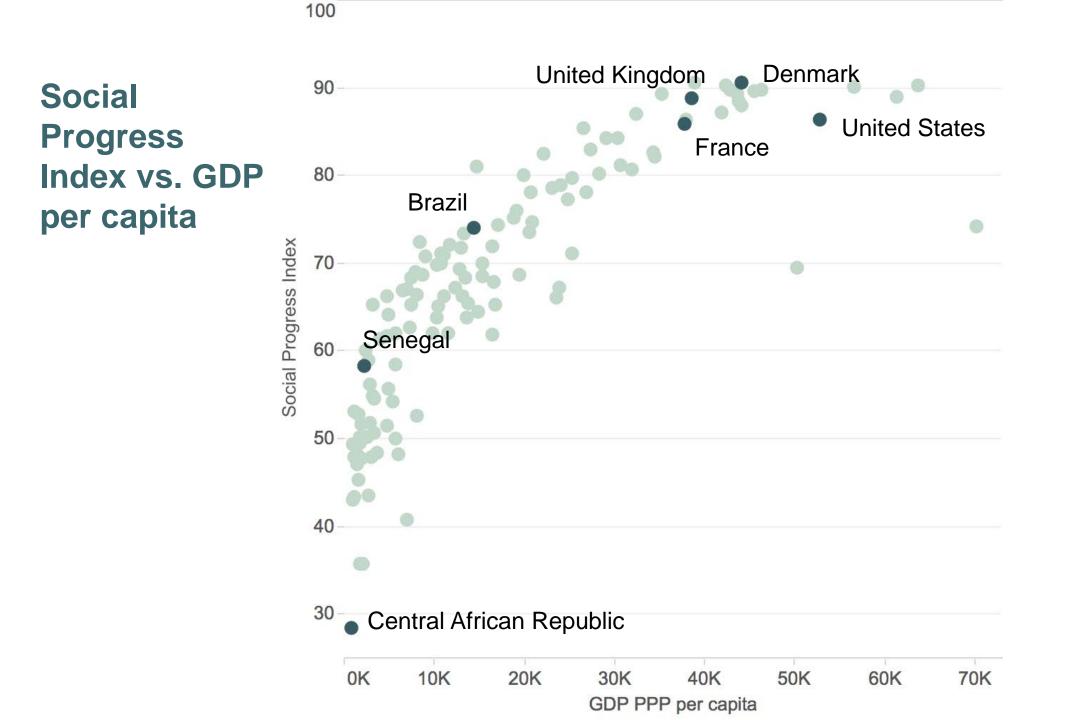




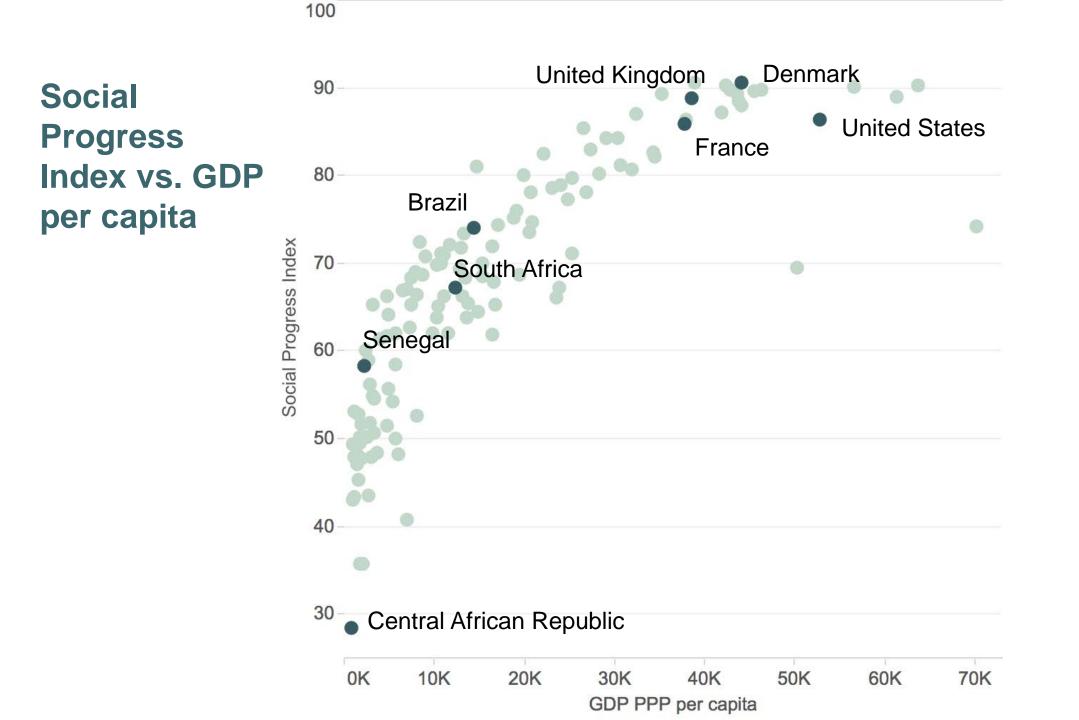




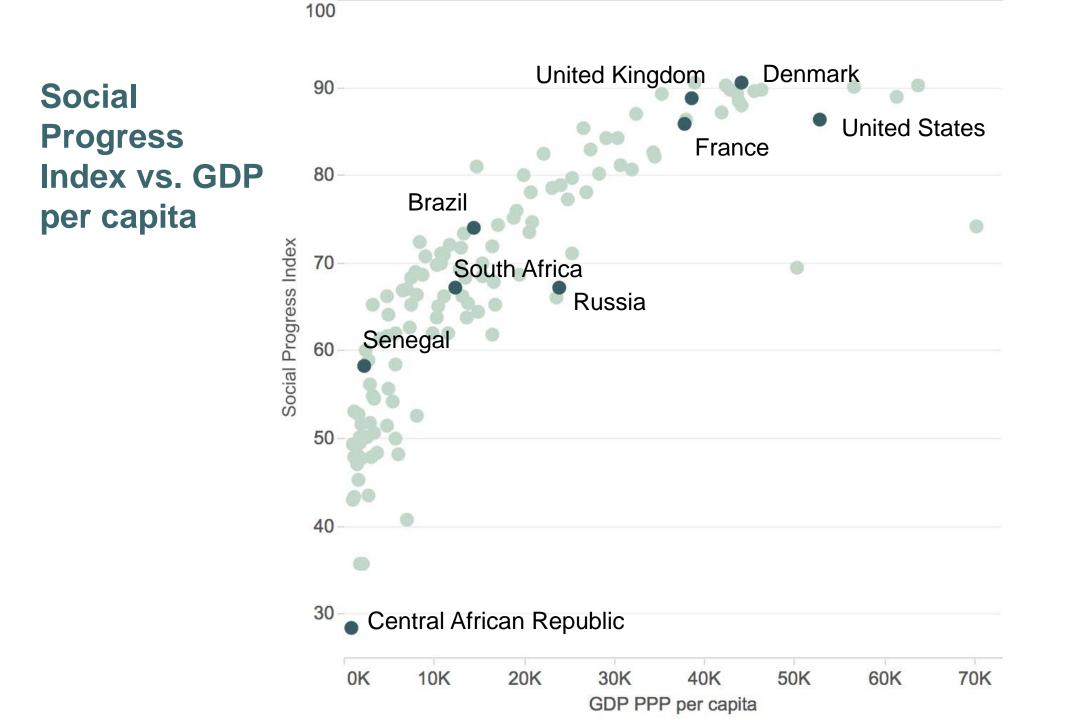




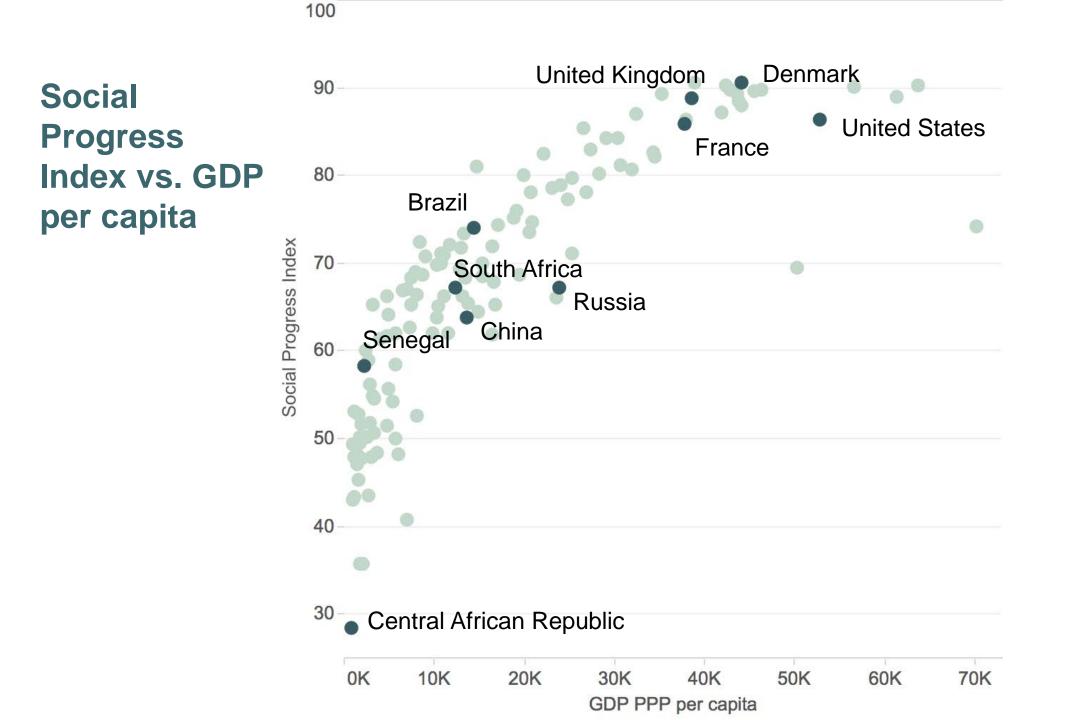




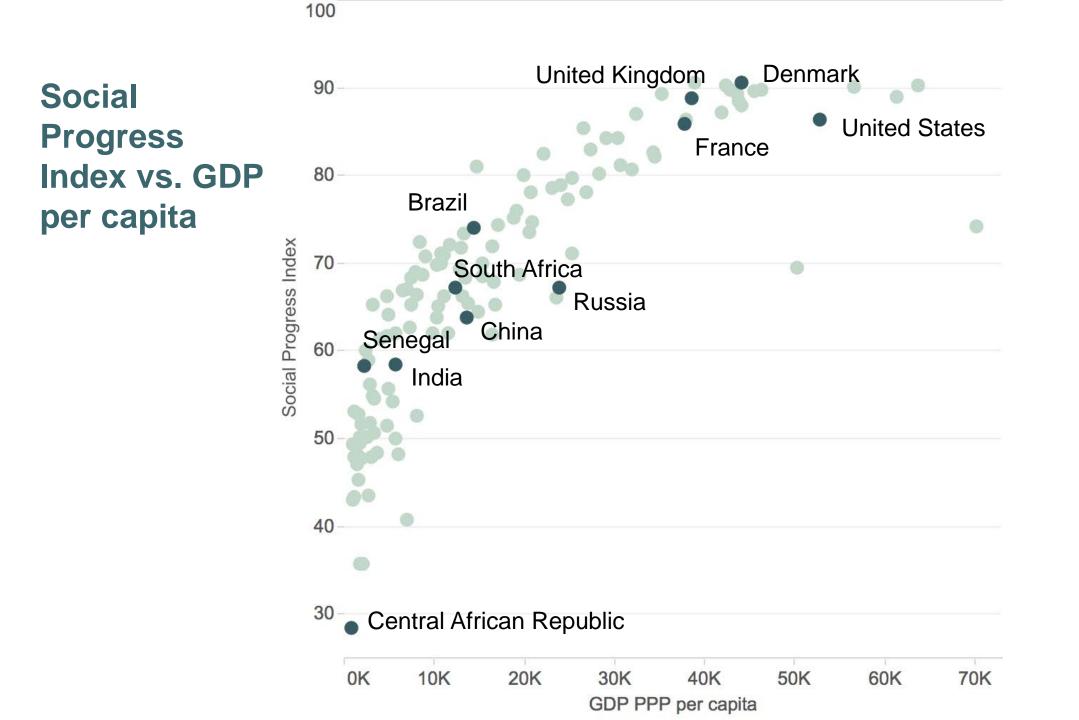




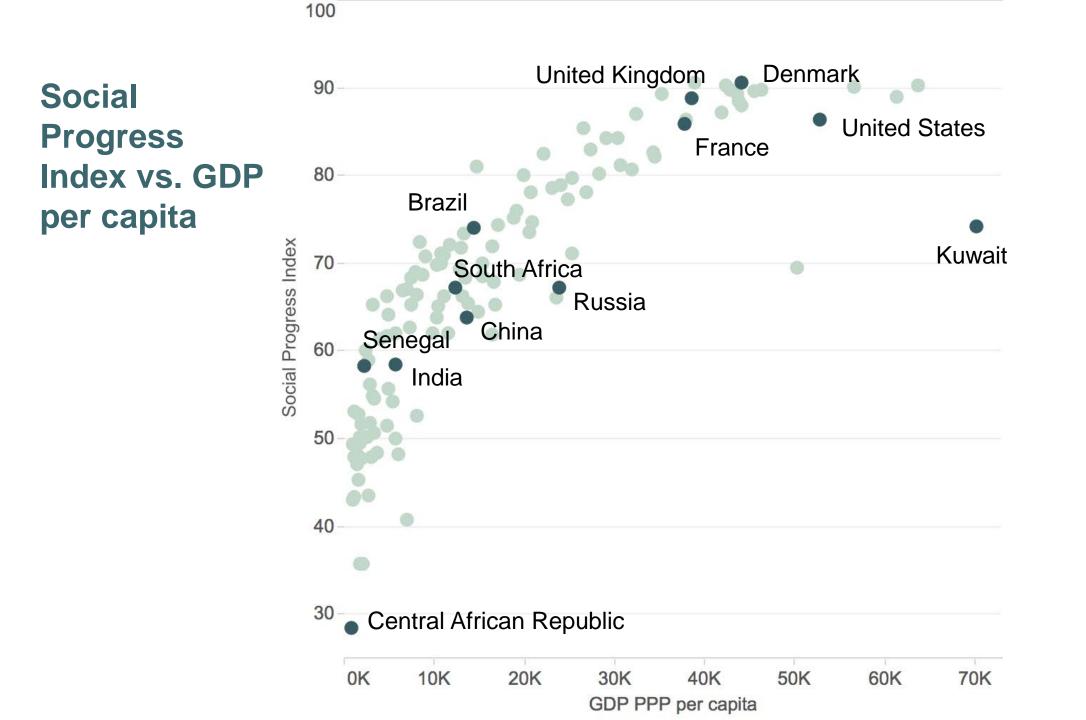




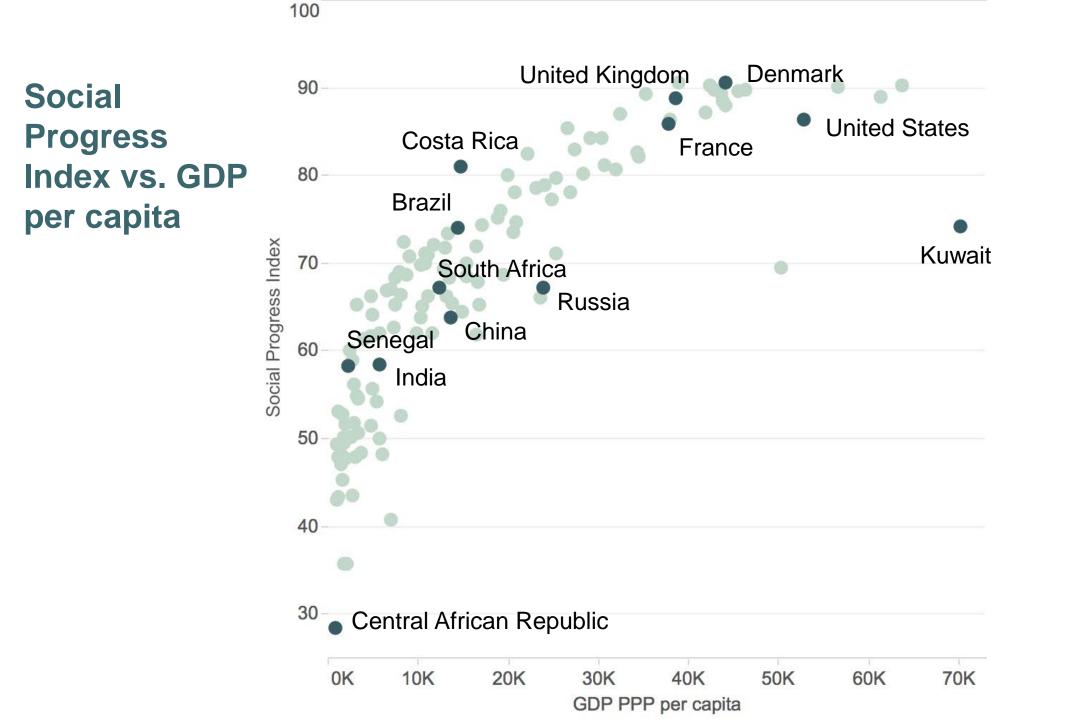






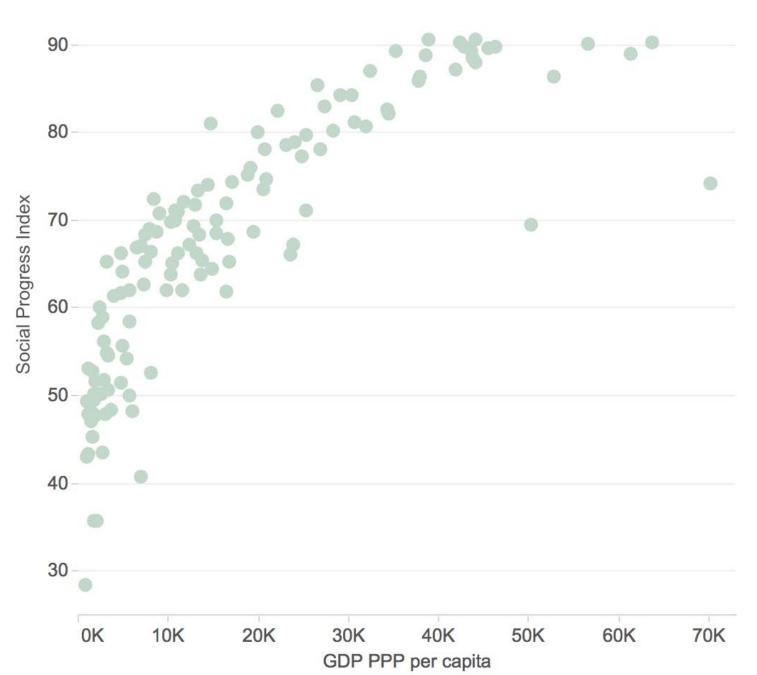






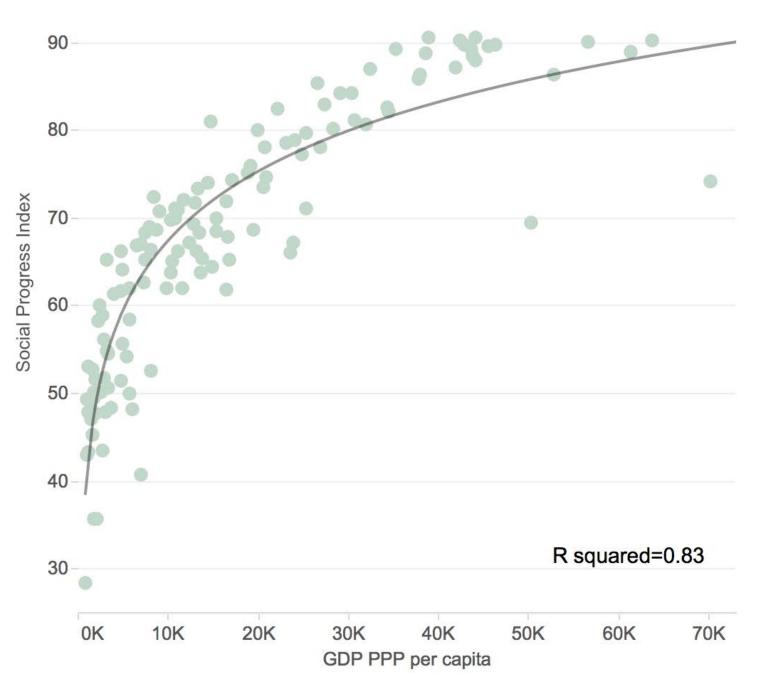


Social Progress Index vs. GDP per capita 100



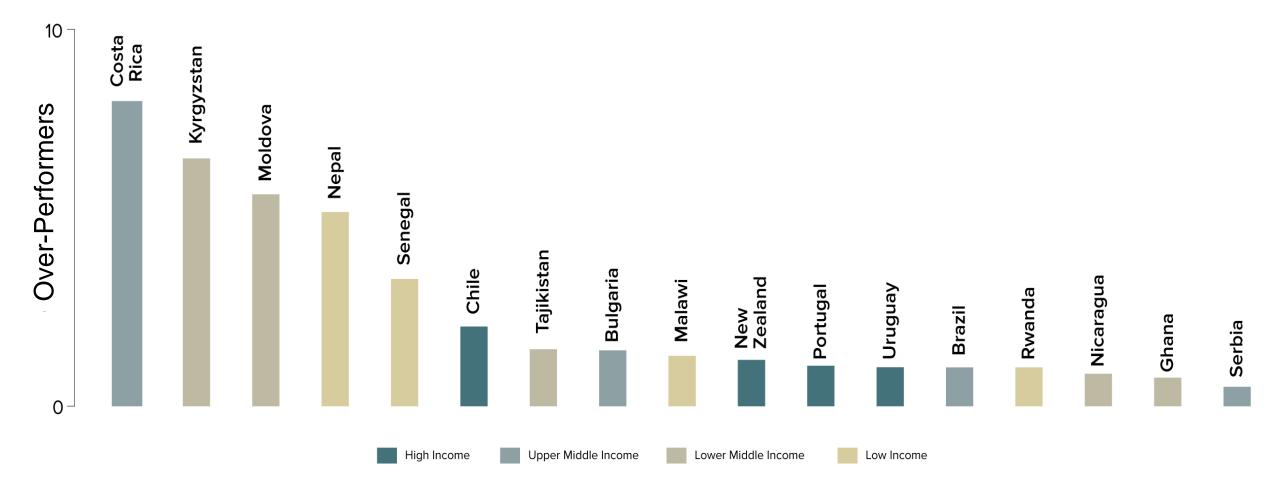


Social Progress Index vs. GDP per capita 100



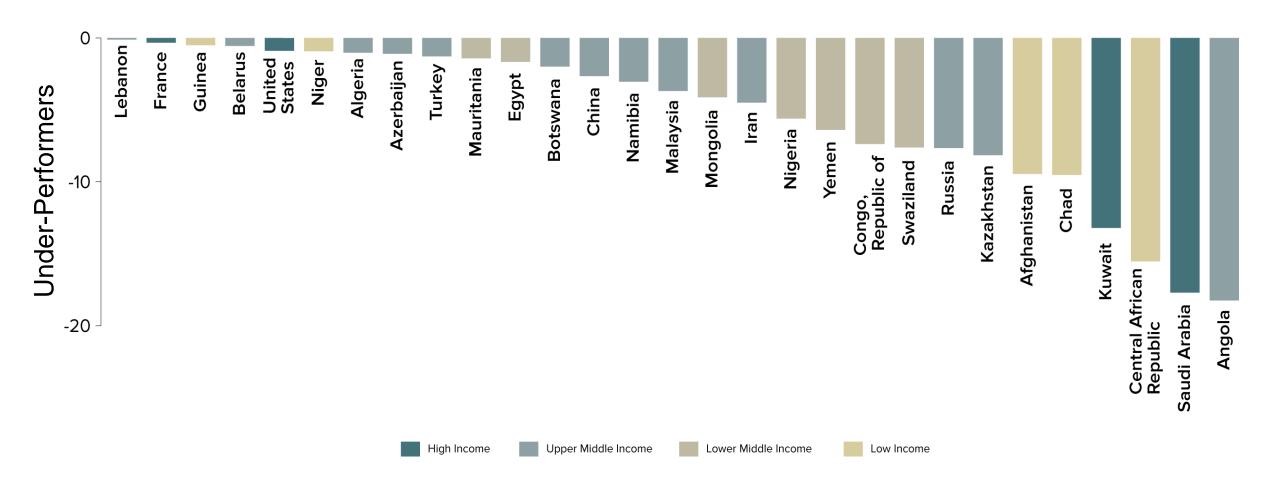


Over-performing countries by income group



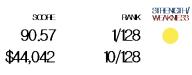
SOCIAL PROGRESS IMPERATIVE

Under-performing countries by income group





2017 Social Progress Index GDP PPP per capita





Basic Human Needs	900FE/ VALUE 96.79	^{RANK}	STRENGTH/ WEAKNESS	Foundations of W
Nutrition and Basic Medical Care	99.2 8	19	•	Access to Basic Knowl
Undernourishment (%of pop.; 5 signifies ≤ 5)	5.00	1	•	Adult literacy rate (% of pop. ag
Depth of food deficit	8.00	1	•	Primary school enrollment (%
(calories/undernourished person; 8 signifies ≤ 8) Maternal mortality rate (deaths/100,000 live biths)	6.50	19	•	Secondary school enrollment Gender parity in secondary er
Child mortality rate (deaths/1,000 live births)	3.50	11	•	(distance from parity)
Deaths from infectious diseases (deaths/100,000)	27.09	42	•	Access to Information and Communications
Water and Sanitation	99 .87	9		Mobile telephone subscriptio
Access to piped water (% of pop .)	100.00	1	•	(subscriptions/100 people)
Rural access to improved water source	100.00	1	•	Press Freedom Index
(% of pop .) Access to improved sanitation facilities	00.00	15		(0=most free; 100=least free)
(% of pop .)	99.60	15	•	Health and Wellness
Sheiter	94.2 7	1		Life expectancy at 60 (years)
Availability of af ordable housing (%satisfied)	76.42	7	•	Premature deaths from non-c
Access to electricity (% of pop.)	100.00	1	•	di seases (deaths/100,000) Suici de rate (deaths/100,000)
Quality of electricity supply (How; 7=high)	6.75	4	•	. , , ,
Household air pollution attributable deaths (deaths/100,000)	0.00	1	•	Environmental Quality
				Outdoor air pollution attributa (deaths/100,000)
Personal Safety	93.75	3		Wastewater treatment (%of wa
Homidide rate (deaths/100,000)	1.00	25	•	Biodiversity and habitat
Level of violent arime (140w; 5-high)	1.00	1	•	(0=no protection; 100=high protec Greenhouse gas emissions
Perceived criminality (1=low; 5=high)	2.00	1	•	(CO2 equivalents per GDP)
Political terror (1=low; 5=high)	1.00	1	•	
Traf c deaths (deaths/100,000)	3.50	5	•	

Foundations of Wellbeing	90.86	PANK 5	STRENCT
Access to Basic Knowledge	98.49	18	
Adult literacy rate (% of pop. aged 15+)			
Primary school enrollment (% of children)	99.54	25	•
Secondary school enrollment (% of children)	100.00	1	•
Gender parity in secondary enrollment (distance from parity)	0.04	52	•
Access to Information and Communications	95.6 4	2	
Mobile telephone subscriptions (subscriptions/100 people)	100.00	1	•
Internet users (%ofpop.)	96.33	3	•
Press Freedom Index (0=most free; 100=least free)	8.89	4	•
Health and Wellness	77.91	26	0
Life expectancy at 60 (years)	23.26	28	•
Premature deaths from non-communicable diseases (deaths/100,000)	248.00	30	ο
Suidide rate (deaths/100,000)	10.35	61	•
Environmental Quality	91.39	6	
Outdoor air pollution attributable deaths (deaths/100,000)	21.37	15	ο
Wastewater treatment (%of wastewater)	91.60	11	•
Biodiversity and habitat (0=no protection; 100=high protection)	97.60	15	•
(CO2 equivalents per GDP)	213.35	8	•

Opportunity	SCOPE/ VALUE 84.06	BANK 8	STEENK WEAKN
Personal Rights	97.89	1	
Political rights (0=no rights; 40=full rights)	40.00	1	•
Freedom of expression (0=no freedom; 16=full freedom)	16.00	1	•
Freedom of assembly (0=no freedom; 1=full freedom)	0.97	1	•
Private property rights (0=none; 100=full)	95.00	1	•
Personal Freedom and Choice	89.83	2	
Freedom over life choices (%satisfied)	94.82	3	•
Freedom of religion (How; 4=high)	3.00	54	•
Early marriage (%ofwomen aged 15-19)	0.00	1	•
Satisfied demand for contraception (% of women)	80.40	36	•
Corruption (0=high; 100=low)	90.00	1	•
Tolerance and Inclusion	78.29	9	
Tolerance for immigrants (0=low; 100=high)	80.31	10	•
Tolerance for homosexuals (0=low; 100=high)	85.87	5	•
Discrimination and violence against minorities (0=low; 10=high)	4.60	27	•
Religious tolerance (How; 4=high)	3.00	54	•
Community safety net (0=low; 100=high)	95.32	4	•
Access to Advanced Education	70.24	21	0
Yéars of tertiary schooling	0.95	23	•
Women's average years in school	15.13	5	•
Inequality in the attainment of education (0=10w; 1=high)	0.03	13	•
Number of globally ranked universities (0=none; 10=most highly rank ed)	5.00	23	•
Percent of tertiary students enrolled in globally ranked universities (0=none; 6=highest enrollment)	4.00	15	•

Strengths and weaknesses

Oveperforming and underperforming are relative to 15 countries of similar GDP per capita:

Sweden, Austria, Germany, Australia, Canada, Netherlands, Belgium, Iceland, Finland, Saudi Arabia, Ireland, United Kingdom, France, Japan, United States

- Overperforming by 1 or more pts.
 Overperforming by less than 1 pt.
- Performing within the expected range
- O Underperforming by less than 1 pt.
- 🛛 🛑 Underperforming by 1 or more pts.
- 🌒 No data available



2017 Social Progress Index GDP PPP per capita

SCOPE	RANK	STRENGTH/ WEAKNESS
86.43	18/128	0
\$52,704	5/128	

UNITED STATES

Basic Human Needs	900FE/ VALUE 93.42	PANK 17	STPENCTH/ WEAKNESS
Nutrition and Basic Medical Care	98.96	36	
Undernourishment (%of pop.; 5 signifies ≤ 5)	5.00	1	•
Depth of food def cit (calories/undemourished person; 8 signifies ≤ 8)	8.00	1	•
Maternal mortality rate (deaths/100,000 live biths)	13.75	39	•
Child mortality rate (deaths/1,000 live biths)	6.50	35	ο
Deaths from infectious diseases (deaths/100,000)	23.33	34	•
Water and Sanitation	9 8.77	27	0
Access to piped water (% of pop .)	98.64	30	ο
Rural access to improved water source (% of popl.)	98.16	44	•
Access to improved sanitation facilities (% of pop.)	99.99	10	•
Shelter	8 9.1 8	10	
Availability of af ordable housing (%satisfied)	56.68	30	•
Access to electricity (% of pop.)	100.00	1	•
Quality of electricity supply (How; 7=high)	6.47	13	•
Household air pollution attributable deaths (deaths/100,000)	0.00	1	•
Personal Safety	86.76	21	
Homidide rate (deaths/100,000)	3.90	70	•
Level of violent arime (How; 5=high)	1.00	1	•
Perceived criminality (How; 5=high)	2.00	1	•
Political terror (1=10w; 5=high)	2.00	34	•
Traf c deaths (deaths/100,000)	10.60	40	•

Foundations of Wellbeing	900FE/ VALUE 84.19	PANK 29	STRENCTH WEAKNESS
Access to Basic Knowledge	97.95	30	
Adult literacy rate (% of pop. aged 15+)			
Primary school enrollment (%of children)	98.04	53	•
Secondary school enrollment (% of children)	97.56	50	•
Gender parity in secondary enrollment (distance from party)	0.02	32	•
Access to Information and Communications	84. 63	27	
Mobile telephone subscriptions (subscriptions/100 people)	100.00	1	•
Internet users (%ofpop.)	74.45	27	•
Press Freedom Index (0=most free; 100=keast free)	22.49	32	•
Health and Wellness	75.88	34	
Life expectancy at 60 (years)	23.61	27	•
Premature deaths from non-communicable diseases (deaths/100,000)	299.40	42	•
Suicide râte (deaths/100,000)	12.41	82	•
Environmental Quality	78.31	33	
Outdoor air pollution attributable deaths (deaths/100,000)	18.48	13	•
Wastewater treatment (%of wastewater)	50.44	36	•
Biodiversity and habitat (0=no protection; 100=high protection)	79.35	73	•
Greenhouse gas emissions (CO2 equivalents per GDP)	392.70	60	•

Opportunity	SCOFIE/ VALUE 81.68	PANK 13	STHENGT WEAKNES
Personal Rights	88.98	19	
Political rights (0=no rights; 40=full rights)	36.00	32	•
Freedom of expression (J=no freedom; 16=full freedom)	16.00	1	•
Freedom of assembly (0=no freedom; 1=full freedom)	0.86	14	•
Private property rights (0=none; 100=tull)	80.00	17	•
Personal Freedom and Choice	79 .88	19	
Freedom over life choices (%satisfied)	75.48	65	•
Freedom of religion (How; 4=high)	3.00	54	•
Early marriage (%ofwomen aged 15-19)	3.00	32	•
Satisfied demand for contraception (% of women)	85.10	13	•
Corruption (0=high; 100=low)	74.00	15	ο
Tolerance and Inclusion	68.30	23	
Tolerance for immigrants (0=low; 100=high)	78.78	16	•
Tolerance for homosexuals (0=low; 100=high)	71.34	19	•
Discrimination and violence against minorities (0=10w; 10=high)	5.10	39	ο
Religious tolerance (How: 4=high)	2.00	92	•
Community safety net (D=low; 100=high)	89.58	31	•
Access to Advanced Education	89.55	1	
Yéars of tertiary schooling	1.86	З	•
Women's average years in school	15.06	7	•
Inequality in the attainment of education (0=low; 1=high)	0.05	28	•
Number of globally ranked universities (D=none; 10=most highly rank ed)	10.00	1	•
Percent of tertiary students enrolled in globally ranked universities Q=none; 6-highest enrolment)	4.00	15	•

Strengths and weaknesses

Oveperforming and underperforming are relative to 15 countries of similar GDP per capita:

Ireland, Saudi Arabia, Switzerland, Netherlands, Austria, Sweden, Denmark, Germany, Australia, Canada, Belgium, Iceland, Norway, Finland, United Kingdom

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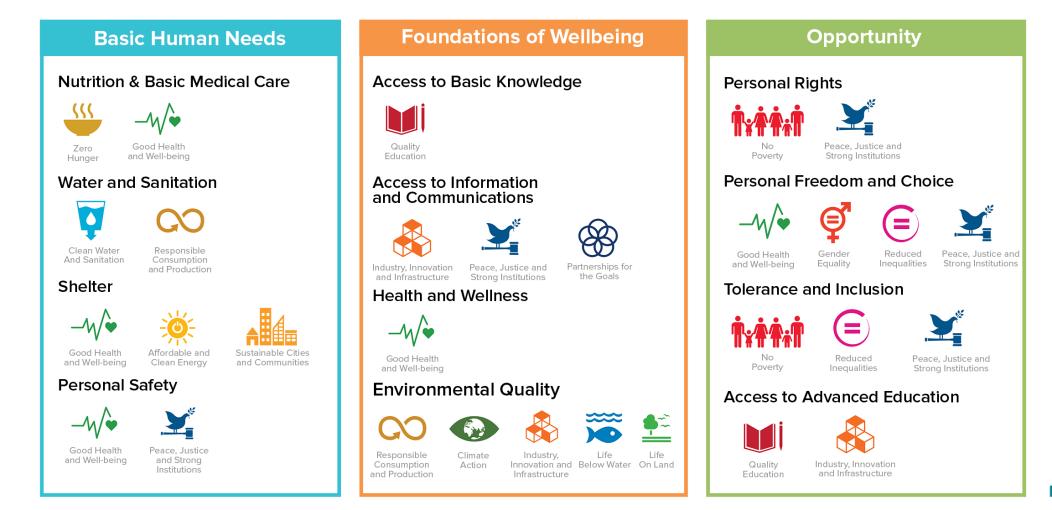
SUSTAINABLE GEALS





Realizing the promise of the Sustainable Development Goals

The Social Progress Index captures outcomes related to 16 of the 17 SDGs in a simple but rigorous framework designed for aggregation, making it an invaluable proxy measure of SDG performance, particularly for areas where official indicators do not exist

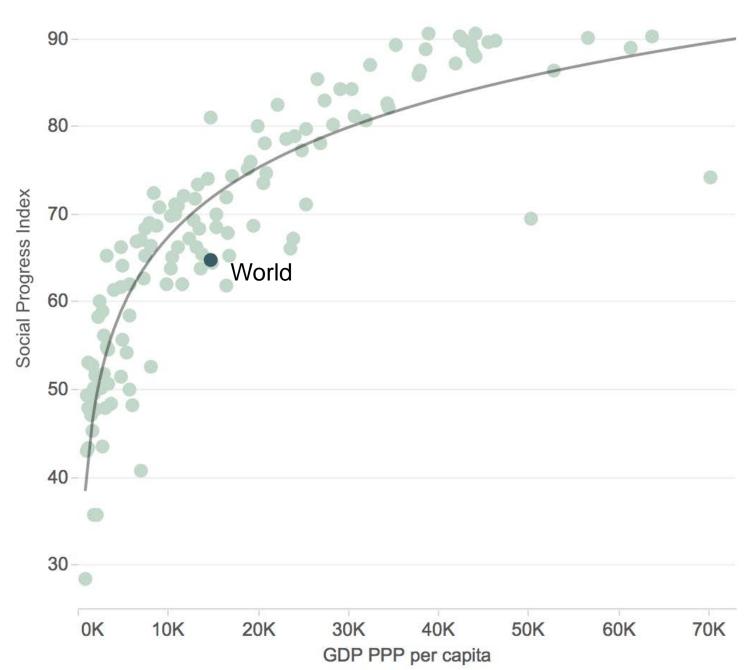


Global change in Social Progress 2014-2017

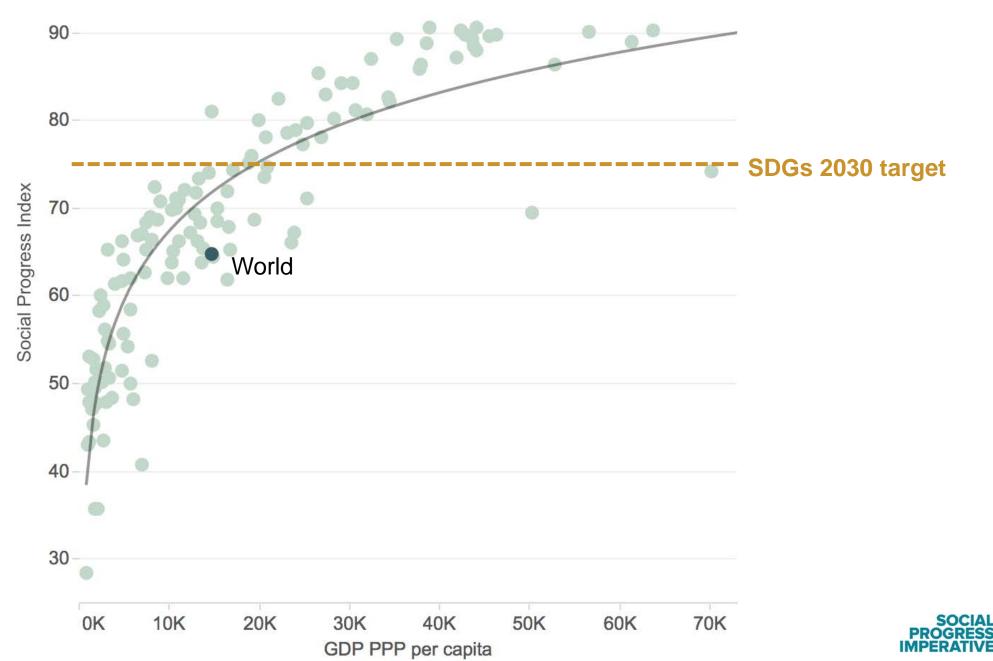
Since 2014, the world aggregate score on the Social Progress Index has improved by 1.66 points











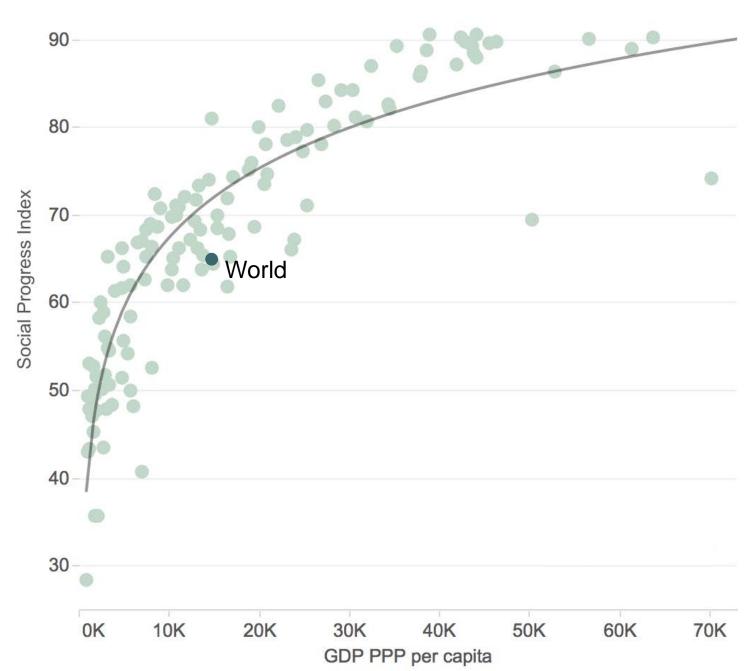
According to a 2015 Deloitte report, the world will come nowhere near achieving the **SDGs through** economic growth alone

Deloitte.

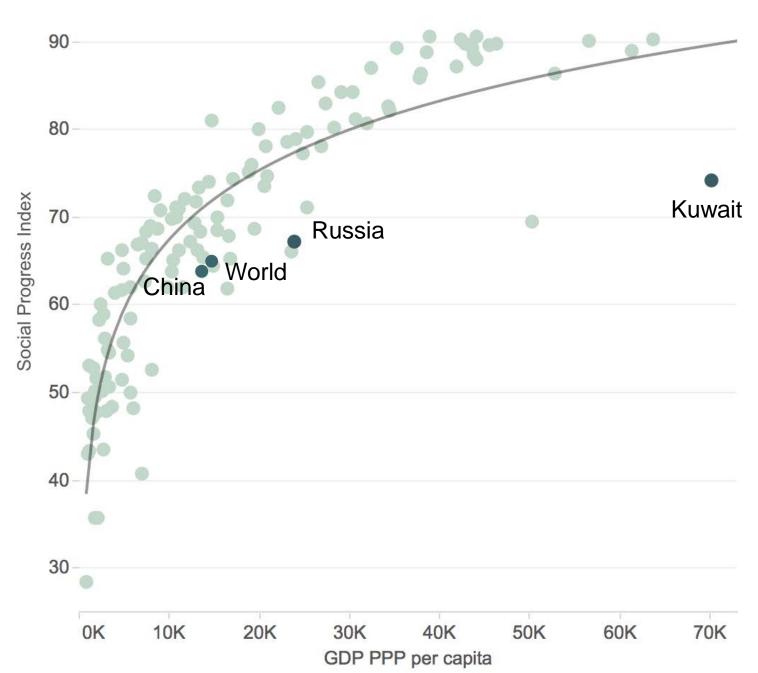
Social Progress in 2030 Developing beyond economic growth

A report for The Social Progress Imperative September 2015

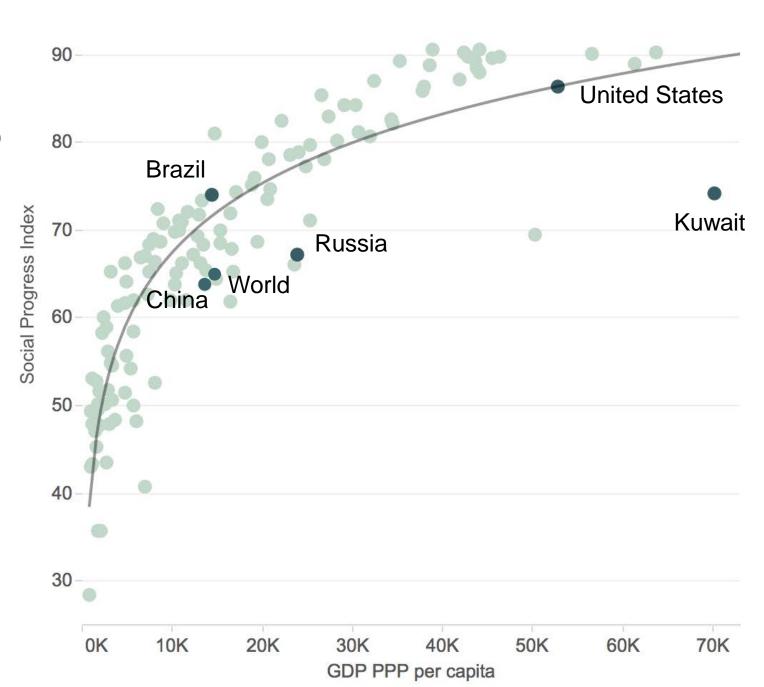














90 **Social United States Progress** Costa Rica Index vs. GDP 80 Brazil per capita Social Progress Index Kuwait 70 Russia World China 60 50 40 30 10K 70K 0K 20K 30K 40K 50K 60K GDP PPP per capita



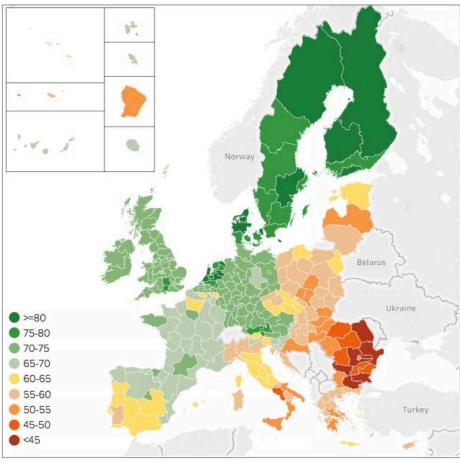
From Index to Action to Impact



Index to Action to Impact: Europe Social Progress Index for 272 regions of the EU

- SPI is partnering with the European Commission to measure social progress across the EU to help guide \$100 billion+ in European development funding.
- This index is used to monitor the Commission's 2014–2020 action program and identify best practices that can be scaled and applied elsewhere.
- SPI is working with countries and regions of the EU to use the Index to tackle challenges such as environmental quality, social inclusion, disaffected youth and other needs.

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Score/value Rank EU Regional Social Progress Index 72.35 81/272 GDP PPP per capita (2011) €80,400 1/272								Inner London	United Kingdom		
Sc	Score/value Ra			Sco	re/value Ra		nk	Scor	e/value	Ran	ık
Basic Human Needs	77.45	166		Foundations of Wellbeing	65.54	101	0	Opportunity	74.33	34	
Nutrition and Basic Medical Car	e 83.83	136		Access to Basic Knowledge	68.91	165		Personal Rights	51.83	92	
Mortality rate before age 65	0.12	102	0	Secondary enrolment rate	0.87	243	•	Trust in the political system	51.63	48	•
Infant mortality	4.30	204	•	Lower secondary completion only	16.00	75	•	Trust in the legal system	27.72	108	
Unmet medical needs	1.48	59	•	Early school leaving	8.50	69	•	Trust in the police	68.65	52	
Insufficient food	7.65	99	•	Access to Information	80.35	22		Quality and accountability of government services	0.56	95	
Water and Sanitation	71.73	228		and Communications				Personal Freedom and Choice	73.40	116	
Satisfaction with water quality*		133	•	Internet at home	94.00	9	•	Freedom over life choices*		138	•
Lack of toilet in dwelling	0.22	17		Broadband at home	94.00	1	•	Teenage pregnancy	1.61	203	
Uncollected sewage	0.00	1	•	Online interaction with public authorities	54.00	60	•	Young people not in education, employment or training	12.67	140	
Sewage treatment	0.00	236	•	Health and Wellness	71.23	167		Corruption	0.74	103	
Shelter	75.73	70		Life expectancy	81.50	89	•	Tolerance and Inclusion	78.52	44	
Burdensome cost of housing	30.67	120		General health status	75.32	38	•	Impartiality of government convices	1.07	33	
Satisfaction with housing	52.97	21		Premature deaths from cancer	76.50	96	•	Impartiality of government services Tolerance for immigrants*	1.07	33 12	•
Overcrowding	7.35	87		Premature deaths from heart disease	50.00	178	•	Tolerance for minorities*		2	
Lack of adequate heating	8.41	142	•	Unmet dental needs	2.43	78	•	Attitudes toward people with disabilities	8.60	2 17	
			-	Satisfaction with air quality*		9	•	Tolerance for homosexuals*	8.00		
Personal Safety	78.75	149		Environmental Quality	42.09	170		Gender gap	-13.27	210	
Homicide rate	2.28	250	•	Air pollution-pm10	21.86	161		Community safety net*		122	-
Safety at night*		153	•	Air pollution-pm2.5	15.54	162			07.47	-	
Traffic deaths	18.71	10	•	Air pollution-ozone	89.27	20		Access to Advanced Education	97.17	7	
				Pollution, grime or other environmental problems	9.35	47	•	Tertiary education attainment Tertiary enrolment	61.03 0.04	1 76	•
				Protected land (Natura 2000)	0.38	264	•	Lifelong learning	19.97	1	

• Underperforming O Less than one point under neutral

O Less than one point over neutral

Overperforming

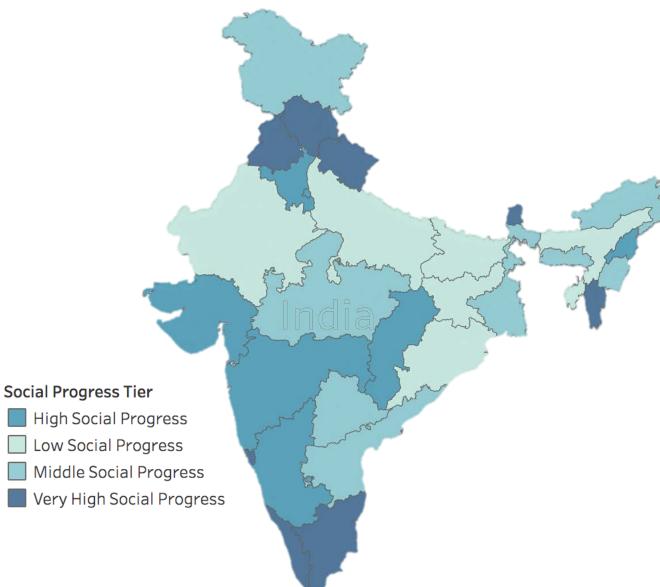
Strengths and weaknesses are relative to 15 regions of similar GDP per capita: Luxembourg; Brussels Capital Region; Hamburg; Bratislava Region; Île de France; Groningen; Prague; Stockholm; Vienna; Upper Bavaria; North Eastern Scotland; Darmstadt; Utrecht; Helsinki; Bremen

Neutral



*Raw data cannot be shown for Gallup indicators

Social Progress Index: States of India



SPI has benchmarked social progress in **28 states in India.** This data reveals that all states have made significant improvements; however, **every state has room for improvement**

The Index identifies country- and state-specific issues. It is helping change makers at the national and state levels frame policies

The development of Social Progress Indices for India's 562 districts and 50 major cities is underway to support business, government and civil society leaders set policies, define actions and prioritize public investments that drive social progress



What does this mean for actuaries?



"The financial services industry has a vital role to play in meeting the Sustainable Development Goals (SDGs). Whilst policymakers often focus on the roughly £150 billion worth of official development assistance, **there needs to be an increased focus on the £300 trillion of capital in the global markets**. If this £300 trillion is harnessed to support, rather than undermine, sustainable development globally **it could be transformative in achieving the Goals.**"



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- The Institute and Faculty of Actuaries



How do we advance society?

Economic Growth GDP per capita

Social Progress

The factors which make up a good life for individuals and a healthy society



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The factors which make up a good life for individuals and a healthy society



Michael Green CEO, Social Progress Imperative

Thank you

@shepleygreen

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Spring Lecture 2018 : The Social Progress Index and the Sustainable Development Goals

Get Involved: #IFoALecture

03 May 2018