Social Futuring Index

Concept, Methodology and Report 2020

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SOCIAL **FUTURING** CENTER

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BUDAPESTI CORVINUS EGYETEM

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Contents

PREFACE **5**
PART I – CONCEPT AND METHODOLOGY **7**
OVERVIEW **8**
I. Introducing the Social Futuring Index (SFI) **10**
II. Normative standards **11**
III. Pillars **13**
IV. Pyramid & dimensions **14**
V. Methodology used to compile the SFI **16**
V.1. Selecting variables 16
V.2. Imputation 18
V.3. Handling outliers 18
V.4. Normalization 19
V.5. Weighting and aggregation 19
V.6. Clustering 20
VI. Indicators **21**
Bibliography **31**

PART II – REPORT 2020 **33**
OVERVIEW **34**
I. Key findings and highlights **36**
I.1. OECD countries' overall SFI ranking 36
I.2. OECD countries' ranking for each SFI normative standard 39
I.2.1. Peace & Security 39
I.2.2. Attachment 41
I.2.3. Care 43
I.2.4. Balance 45
II. OECD countries' overall SFI ranking grouped according to **47**
II.1. Population (large, medium, small) 47
II.2. GDP per capita (high, medium, low) 49
II.3. Area size (large, medium, small) 51
II.4. Population density (high, medium, low) 53
Appendix: *SFI Ranking Tables by Dimensions* **55**

PREFACE

This study aims to summarize in its Part I the concept of Social Futuring (SF) and the applied methodology of the compilation of the Social Futuring Index (SFI). In Part II the 2020 SFI rankings of OECD countries are presented.

The project was undertaken by the Social Futuring Center (SFC) at Corvinus University of Budapest (CUB), Hungary, between 2017 and 2020. The normative, analytical and discursive frameworks of SF have been published recently both in Hungarian and in English: Aczél – Csák – Szántó (eds.): *Társadalmi jövőképesség – Egy új tudományterület bemutatkozása* (2018); Aczél – Csák – Szántó (eds.): *Society and Economy. Special issue on Social Futuring* (2018). The foundations of SFI were summarized in Szántó – Aczél – Csák – Ball: Foundations of the Social Futuring Index. *Információs Társadalom* (2019). The comparison of the SFI with eight similar global indices in terms of nature, society and economy is available in Kocsis: The Social Futuring Index (SFI) in the Context of Economy, Society and Nature – Comparing Nine Composite Indices Measuring Country Performance. SF-Working Paper Series No. 9/2020.

The SFI Project was carried out in collaboration with the following international and national partners: Barabási Lab (Boston MA, USA), Geopolitical Futures (Austin TX, USA), Institute of European Studies, Chinese Academy of Social Sciences (Beijing, China) and Hungarian Central Statistical Office (HCSO, Budapest, Hungary).

Leading researchers and members of the SFI Project Board are János Csák, Petra Aczél, Zoltán Oszkár Szántó and Péter Szabadhegy.

Research fellows who participated in developing the conceptual framework of SF and the foundations and calculation of SFI are: Bálint Ablonczy, Loránd Ambrus, Zsolt Andrási, Zoltán Ábrahám, Gyula Bakacsi, Chris Ball, Tamás Bartus, Pál Bóday, Tímea Cseh, Eszter Deli, Zsolt Főző, George Friedman, Róbert Iván Gál, Csaba Gilyán, Tamás Kocsis, Lajos Kovács, Marcell Kovács,

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We hereby express our gratitude to the following colleagues who contributed to the project with their presentations and comments at our earlier international conferences and workshops: György Alföldi, Zoltán Balázs, Albert-László Barabási, Márton Barta, Meredith Friedman, Judit Gossler, László György, Zsolt Hernádi, Kristóf Iván, Sándor Kerekes, Áron Kincses, András Lánczi, Bertalan Meskó, János Mika, Károly Mike, Erzsébet Nováky, Richárd Ongjerth, Lívia Pavlik, Péter Pillók, Huang Ping, Péter Ruppert, Judit Sass, János Setényi, Károly Takács, Csaba Török, Réka Várnagy, Ágnes Veszelszki, Gabriella Vukovich, and Chen Xin.

In the first part of this volume we outline the foundations and the basic logic of the SFI focusing on its main elements: the normative standards, the pillars, the dimensions and the indicators. We also summarize the methodology used to compile the SFI.

In the second part the detailed SFI Report 2020 is presented starting with the OECD countries' overall SFI rankings followed by country rankings for each SFI normative standard as well as various country groupings.

PART I

SOCIAL FUTURING INDEX – CONCEPT AND METHODOLOGY

OVERVIEW

The holistic concept of Social Futuring (SF) expresses the readiness of social entities (in the current case, OECD countries) in terms of their ability to preserve a good life for their members in a unity of order through the strategic management of future change.

The framework for a good life is provided by Peace & Security, Attachment, Care, and Balance what we call normative standards, with changes appearing that require strategic management in the fields of ecology-geopolitics, technology, socio-economy, and culture – which we call pillars. The degree of SF can be expressed through the quantification of the Social Futuring Index (SFI), the logic of which is derived from multidisciplinary conceptual foundations.

The SFI is conceptualized as the matrix of the above-mentioned normative standards and pillars. As a result, we measure the level of SF based on nine essential dimensions, and twenty-eight selected indicators, as illustrated in the following pyramid-like figure:

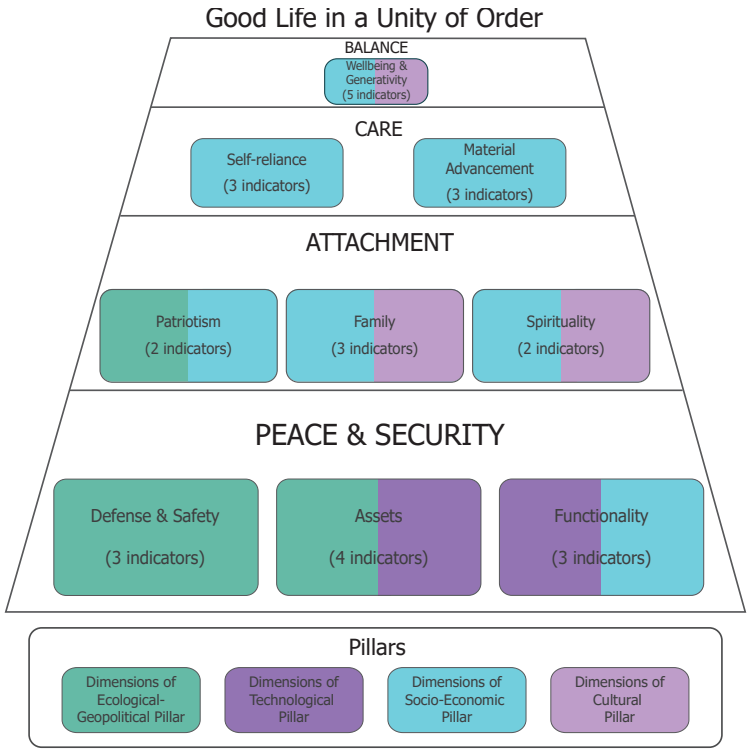

Figure 1:
Outlines of the Social Futuring Index

The SFI is a composite measure applied at a country level which was developed according to standard methodological and statistical routines. The indicators of the index were selected from a number of internationally recognized databases which are provided mostly by the OECD, World Bank, and World Value Survey.

I. INTRODUCING THE SOCIAL FUTURING INDEX (SFI)[1]

The study of resilience, future orientation, and future proofing (Aczél 2018) contributes new insights into how cultures differ and what parameters affect an individual's or a group's ability to engage the surrounding world over time. Social futuring aims to do the same while providing a normative framework for analysis. But, as a project, it is not merely an intellectual endeavor. The social futuring initiative set for itself the practical goal of developing the SFI, a composite measure applicable to countries comprising a number of dimensions and indicators related to four normative standards and four pillars. The indicators of the index are selected from a number of internationally recognized databases which are provided mainly by the OECD, World Bank, and World Value Survey. The main focus of the Index is a 'life in a unity of order,' which can be characterized by four normative standards; namely, Peace & Security, Attachment, Care (Material Advancement and Freedom) and Balance, as illustrated in Figure 2.

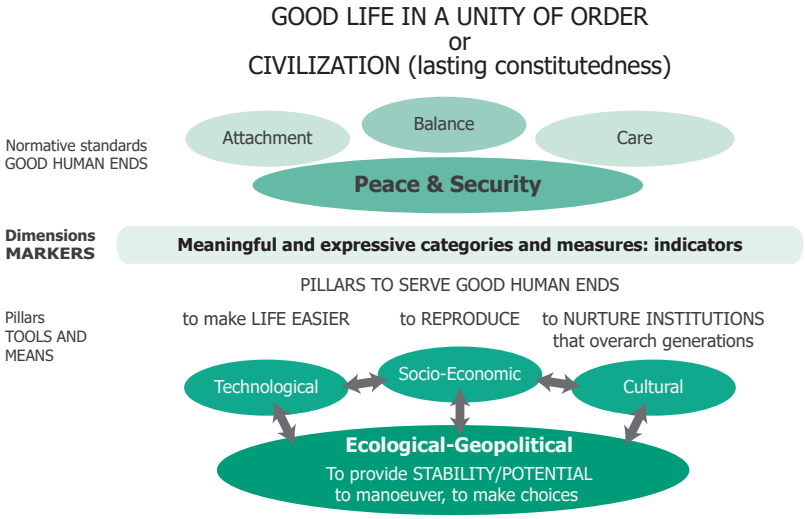

Figure 2:
The conceptual interrelations of the SFI's normative standards, dimensions and pillars

[1] The SFI was developed on the basis of the normative, discursive and analytical conceptual frameworks of SF. See for details Csák (2018); Aczél (2018), Monda (2018), Kocsis (2018), Szántó (2018) and Szántó et. al (2019). The present introduction to SFI was prepared using parts of the latter paper.

II. NORMATIVE STANDARDS

In order to operationalize the normative framework, the SF Project defined the following normative standards:[2]

1. **Peace & Security:** This is the minimum substance of a "unity of order". It enables social entities to reproduce, to raise children and to provide for themselves and others in a safe environment, furthermore to make predictions, to set goals and functionally influence their future operation based on fundamental assets.
2. **Attachment:** This is essential for healthy bodily, psychological, intellectual and spiritual human development. The most basic unit of Attachment is the Family, which determines the consciousness of what a "relationship, dignity, equity, authority and hierarchy are; what is good and bad, just and unjust; what is love, gift and reciprocity" (Csák 2018, 37). Family bonds are also essential in enabling Attachment to larger communities such as nations or religious groups.
3. **Care** (Material Advancement and Freedom): "The maintenance of material goods must entail the accepted practices of production, distribution and acquisition; use and disposition of private or public goods; extendable management skills; and, therefore an image of wealth and the nature of work" (Csák 2018, 37-38). Freedom is the ability of self-determination and self-reliance to actualize one's potential and capacity to control one's own fate.
4. **Balance:** This is a real and perceived social state that is free from extreme social differences and reflects the importance of responsibility across generations. Balance is the precondition of good life, wellbeing and generativity, by which people can be free from unproductive societal comparisons (such as envy).

These four normative standards follow each other in a hierarchical order: without the minimum level of Peace & Security, there can be no Attachment, Care and Balance, without the minimum level of Attachment, there can be no Care and Balance, and without the minimum level of Care, no Balance is possible.

[2] See Csák (2018) for greater detail.

While the ultimate aim is to develop generally applicable indices for social entities of all types and sizes, the social futuring project started by focusing on developing a country-level index for three practical reasons. First, a country is about the largest social entity that has a defined leader (the government or state) that represents the constituent members, generally through democratic institutions. Second, data is available for many countries, allowing the first indices to be constructed from current data sources rather than requiring the research project to solve two problems at once: constructing an index as well as generating new data. Third, in the same way that the concept of social futuring needed to define itself in comparison to other concepts or approaches in the social sciences, so too must a new index find its home among other existing indices. Therefore, starting with countries that are part of other currently existing indices allows the SFI to distinguish itself by highlighting the differences from and similarities to such other regularly published indices.[3]

The outlines of the SFI are presented in Figure 2 to allow further conceptualization of the SFI and its pillars. According to this logic, we can differentiate and define the following four pillars:

- Ecological-Geopolitical,
- Technological,
- Socio-Economic, and
- Cultural.

[3] This last reason also allows us to test statistically for the difference between the SFI and other indices, adding an objective element to the claim that the SFI is unique. As a first attempt, see: Kocsis (2020). Kocsis compared the SFI with eight other country-level indices, namely with the Better Life Index (BLI), Change Readiness Index (CRI), Global Resilience Index (GRI), Human Development Index (HDI), Happy Planet Index (HPI), Inclusive Development Index (IDI), Sustainable Development Goals Index (SDG), and the World Happiness Index (WHI) from three different perspectives, namely, Nature, Society, and Economy. As a general result of this comparison, he concluded that SFI represents a well balanced, fundamentally „social"-based composite for both decision makers and those interested in the concept of social futuring. Thus, both the concept of social futuring itself and the SFI fill in the gaps in the economic-social-nature categorization of the world. Among the major composites known today, the SFI stands out primarily for its social (human) emphasis – while also taking into account both economic and nature related aspects in a proportionate way. way.

III. PILLARS

1. The **Ecological-Geopolitical pillar** captures aspects of a social entity such as its basic assets (energy, water, land, etc.) and geopolitical positions without which it would not have resources to maintain itself and provide its members with stability and freedom of choice.

2. The **Technological pillar**, by making life easier, assures the undisturbed development of a social entity's general functionality.

3. The **Socio-Economic pillar** includes the material (capital, labor, unemployment, schooling and GDP, etc.) and social factors (family, fertility, work-life balance, inequalities, etc.) of the reproduction of human life.

4. The **Cultural pillar** relates to the factors of religiousness and traditions, focusing on the role of social institutions that overarch generations.

IV. PYRAMID & DIMENSIONS

As a result, the matrix of the four normative standards and the four pillars combined defines the nine dimensions of the SFI.[4]

We classified the nine dimensions according to two aspects: (1) the basic forms of SF such as (i) *proactive*, when social entities are able to influence future changes directly in order to deploy their long-term SF potential, (ii) *active*, when they are able to improve their functional operation by exploiting opportunities resulting from expected changes, and (iii) *reactive*, when in order to maintain their way of life, they can manage the risks that may stem from future changes; (2) whether the phenomena and processes inherent in the different dimensions can be influenced by targeted policy measures (*policy sensitivity*, *yes/no*).

The nine essential dimensions can be defined in the following way:

1. **Defense & Safety:** The ability and sense of duty to create and maintain the integrity of a country's inner and outer order.
2. **Assets:** The creation and maintenance of critical and strategical resources.
3. **Functionality:** The systematic and creative deployment of natural and human-made infrastructure in order to create competitive foundations.
4. **Patriotism:** The ability to translate family and interpersonal attachments into belonging to greater communities such as nation.
5. **Family:** The creation of primary bonds between parents, children and close kin.
6. **Spirituality:** The transcendent efforts (like religion and tradition) that support the long-term subsistence of a social entity.

[4] The dimensions are concepts that can be identified in the intersection of the normative standards and the pillars. They indicate human, environmental and instrumental phenomena, abilities and capacities that interpret the meaning of the given normative standard. From the theoretically possible sixteen (4 by 4) dimensions we selected the nine essential ones.
The pillars, as the means of serving good human ends, are indicated by different colors in *Figure 2.*, depending on their appearance in the different dimensions by themselves, or with another pillar.
The height of the four normative standards indicates their different weights in calculating the SFI, namely: 40%, 30%, 20% and 10%, reflecting their hierarchical importance. Furthermore, we consider Assets and Family to be two key dimensions which deserve double weighting. For more details on the methods of SFI calculation see sections V-VI. of Part I.

7. **Self-reliance:** Members of a social entity – using their abilities – exploit their opportunities in order to provide wellbeing for themselves and their loved ones.
8. **Material Advancement:** The provisioning and maintenance of material existence without jeopardizing next generations' room to maneuver.
9. **Wellbeing & Generativity:** The management of extreme social differences, the harmonization of reality and expectations, reaching contentment by avoiding the use of opiates and promoting others' development.

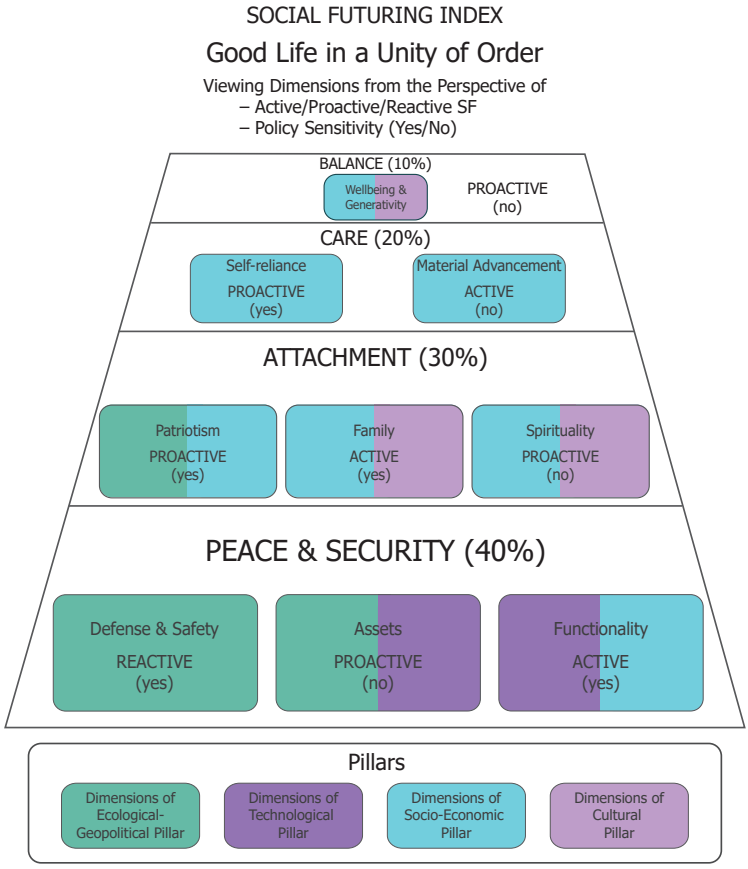

Figure 3:
The normative standard based matrix structure of the SFI

V. METHODOLOGY USED TO COMPILE THE SFI[5]

The SFI is a composite index of sub-indexes comprising a hierarchical indicator system based on the conceptual framework defined by the Social Futuring Initiative. Simply put, the SFI is a weighted average of carefully selected indicators, which best capture the elements of Social Futuring.

The SFI comprises 28 indicators which were selected with the assistance of an expert panel. All indicators are normalized – after outliers were handled – on a scale of 0 to 100. The indicators are weighted and aggregated according to the structure of the SFI framework.

In order to best grasp and convey the concept of the indicator, a hierarchical structure was selected from a number of indicator system structures. The hierarchical structure makes it possible to create sub-indicators at different levels to examine the contexts of the conceptual framework, which makes the analysis even deeper. In general, such indicator systems are the most suitable choice for the better presentation of complex, multi-dimensional phenomena.

In order to connect the normative standards with the pillars defined in the overall framework, definitions were prepared to describe the phenomena of nine essential paired intersections of the two aspects, based on which appropriate indicators could be selected.

V.1. Selecting variables

An expert panel with specialists from different academic disciplines and statistics selected the indicators and compiled the first set of indicators that best suited the written definitions. The selection process of the indicators followed the basic principle that indicators had to:

- be measurable/available,
- be accessible from official, publicly available sources,

[5] All data and methods used during the compilation of the SFI 2020 are available in detail on the SFI website to increase the replicability of the methodological procedures.

- have at least OECD-country coverage,
- be without or have limited overlap with other indicators, and
- be associated with a measurable range.

Several workshops served to finalize and fine tune the indicator set to avoid overlaps, as well as to maintain a balance between the different elements of the framework. The first set covered around 120 indicators, which was reduced to the final 28 essential indicators, which are deemed relevant and meet the above-mentioned basic principles.

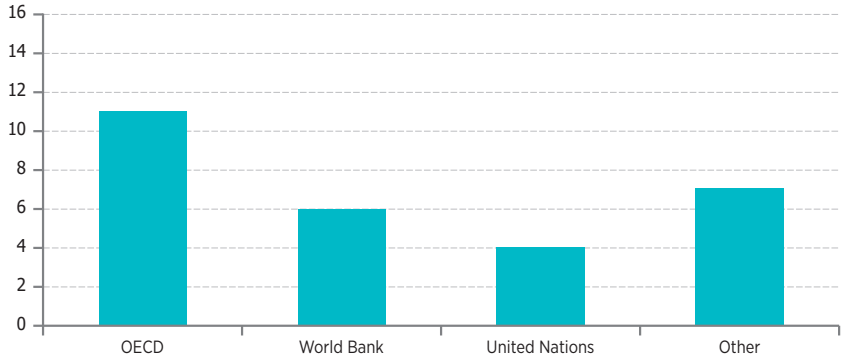

Figure 4:
Sources of indicators

Three types of indicators were chosen:

1. *Relative indicators:* relative indicators are obtained by dividing an indicator by another indicator- in order to maintain comparability between countries. The basic indicators used in the denominator are GDP, population or others such as the number of households or area.
2. *Scales:* some indicators are defined to be measured along a predefined range.
3. *Product (or mix) indicators:* to measure both temporal change and the current level of a given phenomena. The indicator is a product of two basic indicators: the percentage change in the phenomenon over time and the percentage deviation of the current value from the average.

For each indicator, the most recent data available was used. (Available until 1st May 2020). In most cases, 2017-2018 data were available. In some cases, the model relies on earlier data.

For each indicator, the direction (positive or negative) was determined to the concept of social futuring, based on its relevance.

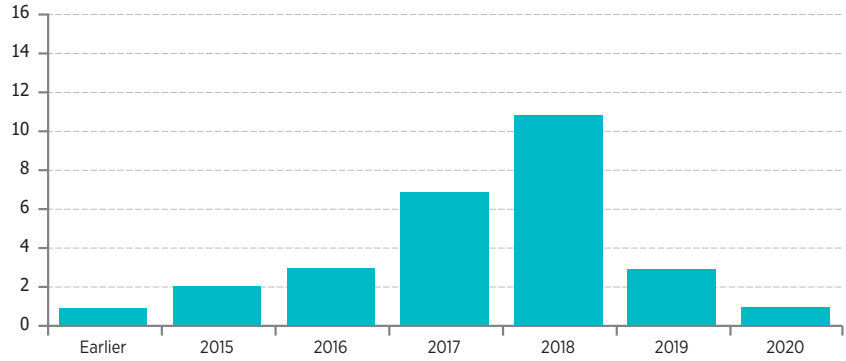

Figure 5:
Reference years of indicators

V.2. Imputation

Although the selection of indicators was based on maximum country coverage, in the case of some indicators, data from a few countries were either missing or significantly different in time (4-5 years) from other countries. In these cases, the data were usually imputed using other reliable sources or in some cases replaced with the value of a similar country. Replaced data represent only 2.5 percent of the total data used.

V.3. Handling outliers

Outliers are individual values that fall outside of the overall pattern of a data set. Outliers were filtered out before data were normalized, since they could have significantly affected normalized values, especially when applying the min-max approach. The interquartile range rule was

used for detecting the presence of outliers. The interquartile range (IQR) is calculated by subtracting the first quartile (Q1) from the third quartile (Q3). According to the normal rule, if an individual value is higher than Q3+1.5*IQR or smaller than Q1-1.5*IQR, the data is considered as an outlier. Outliers are replaced with Q3+1.5*IQR or Q1-1.5*IQR

V.4. Normalization

Normalization is required prior to any data aggregation, as the indicators in a data set often have different measurement units or orders of magnitude. Different normalization and aggregation techniques were tested (min-max, standardization, ranking, above-below mean, categories). The min-max method was chosen because it best met the needs of the model in relation to the compilation of the hierarchical composite indicator. There are no negative numbers, or there is no problem with handling 0, thus additivity is retained.

V.5. Weighting and aggregation

Weights were determined by expert consensus. They were defined on the basis of the conceptual framework, taking into account the importance of normative standards. Within the normative standards, two dimensions (Assets and Family) were given higher weights within its normative standard. All indicators within each dimension were given equal weights.

Aggregation was based on weights and normalized indicator values. The final SFI and/or any sub-indicator is the weighted sum of the normalized indicator values. Also, the composite indicator at any given level (dimension or normative standard) can be built from the sub-indicators that make it up. This greatly facilitates the analysis of the effect of the indicator composition.

Normative standards	Weights by normative standard	Dimensions	Weights by dimension	Number of indicators within dimension	Weights by indicator
Peace & Security	40	Defense & Safety	10	3 indicators	3.33
		Assets	20	4 indicators	5.00
		Functionality	10	3 indicators	3.33
Attachment	30	Patriotism	7.5	2 indicators	3.75
		Family	15	3 indicators	5.00
		Spirituality	7.5	2 indicators	3.75
Care	20	Self-reliance	10	3 indicators	3.33
		Material Advancement	10	3 indicators	3.33
Balance	10	Wellbeing & Generativity	10	5 indicators	2.00

Table 1:
Weighting of the components of the SFI

Composite indicators can be interpreted as the weighted sum of the normalized indicator values (this makes it possible to examine the weight of sub-indicators within higher-level indicators), or on a scale from 0 to 100.

V.6. Clustering

The data were analyzed and compared using several methods for the cluster analysis.

For clustering we used the k-means algorithm, which is one of the most popular clustering algorithms. In the k-means algorithm, a set of data is classified using a certain number of clusters (k clusters) which are initialized a priori. This defines k centroids, one for each cluster and then considers the data objects belonging to the given data set and associates these data objects with the closest centroid. Euclidean distance is applied to determine the distance between data objects and the centroids.

To examine the relationship and similarity of the countries, we calculated the clusters (for clusters between 2 and 10) at each indicator level (indicator, dimension, and normative standard).

VI. INDICATORS

INDICATORS USED FOR NORMATIVE STANDARD PEACE & SECURITY – DEFENSE & SAFETY DIMENSION

(reactive, policy sensitivity: yes)

1. Political stability and absence of violence or terrorism (direction: positive, weight: 3.33%)

Definition: Political stability and the absence of violence or terrorism measures perceptions of the likelihood of political instability and/or politically-motivated violence, including terrorism. The estimate gives the country's score on the aggregate indicator, in units of a standard normal distribution, i.e. ranging from approximately -2.5 to 2.5.

Unit of measure: index (-2.5 to 2.5)

Source of data: WB, http://info.worldbank.org/governance/wgi/Home/Reports

2. Robbery (direction: negative, weight: 3.33%)

Definition: Robbery is a property crime that involves the use of violence or threat of violence. Theft of property from a person, overcoming resistance by force or threat of force. Robbery included muggings, bagsnatching, and theft with violence.

Unit of measure: per 100,000 population

Source of data: United Nations Office on Drugs and Crime (UNODC) https://dataunodc.un.org/crime/robbery

3. Military expenditure (direction: positive, weight: 3.33%)

Definition: Military expenditure data from SIPRI are derived from the NATO definition, which includes all current and capital expenditure on armed forces, including peacekeeping forces; defense ministries and other government agencies engaged in defense projects; paramilitary forces, if these are judged to be trained and equipped for military operations; and military space activities.

Unit of measure: percent of GDP

Source of data: WB, https://data.worldbank.org/indicator/MS.MIL.XPND.GD.ZS

INDICATORS USED FOR PEACE & SECURITY NORMATIVE STANDARD – ASSETS DIMENSION
(proactive, policy sensitivity: no)

4. Ecological balance (direction: positive, weight: 5%)

Definition: The difference between a population's Ecological Footprint and a country's biocapacity. If a country's demand exceeds its biocapacity, it has an ecological deficit. If a country's biocapacity exceeds its Ecological Footprint, it has an ecological reserve.

Unit of measure: global hectare

Source of data: Global Footprint Network, http://data.footprintnetwork.org/#/exploreData

5. Arable land (direction: positive, weight: 5%)

Definition: Arable land (hectares per person) includes land defined by the FAO as land under temporary crops (double-cropped areas are counted once), temporary meadows for mowing or for pasture, land dedicated to market or kitchen gardens, and land temporarily fallow. Land abandoned as a result of shifting cultivation is excluded.

Unit of measure: hectares per person

Source of data: WB, http://wdi.worldbank.org/table/3.1#

6. Net energy imports (direction: negative, weight: 5%)

Definition: Net energy imports are estimated as energy use minus production, both measured in oil equivalents.

Unit of measure: percent of energy use

Source of data: WB, http://wdi.worldbank.org/table/3.8

7. Renewable water resources (direction: positive, weight: 5%)

Definition: Total annual actual renewable water resources per inhabitant [Total renewable water resources per capita] = [Total renewable water resources]*1000000/[Total population].

Unit of measure: cubic meter/inhabitant/year

Source of data: FAO, http://www.fao.org/nr/water/aquastat/data/query/index.html

INDICATORS USED FOR PEACE & SECURITY NORMATIVE STANDARD – FUNCTIONALITY DIMENSION
(active, policy sensitivity: yes)

8. High-technology exports (direction: positive, weight: 3.33%)

Definition: High-technology exports are products with high R&D intensity, such as those associated with aerospace, computers, pharmaceuticals, scientific instruments, and electrical machinery. (Data are given as percentages of manufactured exports). Because industrial sectors specializing in a few high-technology products may also produce low-technology products, the product approach is more appropriate for international trade.

Unit of measure: percent of manufactured exports

Source of data: WB, https://data.worldbank.org/indicator/TX.VAL.TECH.MF.ZS

9. Road density (per capita) (direction: positive, weight: 3.33%)

Definition: Road density is the ratio of the length of the country's total road network to the country's population. The road network includes all roads in the country: motorways, highways, main or national roads, secondary or regional roads, and other urban and rural roads. The Global Roads Inventory Project is a harmonized global dataset of approximately 60 geospatial datasets on road infrastructure. The resulting dataset covers 222 countries and includes over 21 million km of roads, which is two

to three times the total length included in the currently best available country-based global roads datasets.

Unit of measure: km per capita

Source of data: Global Roads Inventory Project + own calculation, https://stats.oecd.org/Index.aspx?DataSetCode=ITF_INDICATORS

10. Households broadband internet connection (direction: positive, weight: 3.33%)

Definition: Household broadband access provides a measure of the uptake of broadband technology by households. It refers to the share of households that have purchased subscriptions to fixed-line or mobile broadband services.

Unit of measure: percent of households

Source of data: OECD, https://goingdigital.oecd.org/en/indicator/13/

INDICATORS USED FOR ATTACHMENT NORMATIVE STANDARD – PATRIOTISM DIMENSION
(reactive, policy sensitivity: no)

11. Persons living abroad (direction: negative, weight: 3.75%)

Definition: Proportion of (estimates of) the international migrant (mid-year) stock, by origin and the total mid-year population (obtained from World Population Prospects: The 2017 Revision).

Unit of measure: percent of population of origin country

Source of data: UN, https://www.un.org/en/development/desa/population/migration/data/estimates2/estimates19.asp

12. Registered voters who actually voted (direction: positive, weight: 3.75%)

Definition: The total number of votes cast (valid or invalid) divided by the number of names on the electoral register, expressed as a percentage.

Parliamentary Elections: The parliamentary elections displayed in the Voter Turnout database are elections to the national legislative body of a country or territory. When the legislative body has two chambers, only the second (lower) chamber is included. If elections are carried out in two rounds (using the Two-Round System TRS), only the second election round is included.

Unit of measure: percent

Source of data: IDEA, https://www.idea.int/data-tools/question-view/521

INDICATORS USED FOR ATTACHMENT NORMATIVE STANDARD – FAMILY DIMENSION
(active, policy sensitivity: yes)

13. Employees working very long hours - work-life balance (direction: negative, weight: 5%)

Definition: Percentage of all employees usually working 50 hours or more per week.

Unit of measure: percent

Source of data: OECD, https://stats.oecd.org/Index.aspx?DataSetCode=BLI#

14. Value of family benefits (direction: positive, weight: 5%)

Definition: Total family benefits for a two-parent, dual-earner family for two children with a youngest child aged six, as % of average full-time earnings.

Unit of measure: percent of average full-time earnings

Source of data: OECD, https://stats.oecd.org/Index.aspx?QueryId=79865#

15. Single person households (direction: negative, weight: 5%)

Definition: Share of single person households among all households.

Unit of measure: percent

Source of data: Eurostat, http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ilc_lvph02&lang=en

INDICATORS USED FOR NORMATIVE STANDARD ATTACHMENT – SPIRITUALITY DIMENSION
(proactive, policy sensitivity: no)

16. Important to follow traditions and customs (direction: negative, weight: 3.75%)

Definition: On a scale from 1 to 6, where 1 means 'very much like me' and 6 means 'not at all like me'.

Unit of measure: scale 1 to 6

Source of data: World Values Survey, http://www.worldvaluessurvey.org/WVSDocumentationWV6.jsp

17. Self-reported religiousness (direction: positive, weight: 3.75%)

Definition: The share of those who claimed to be religious to the question. Are you: (1) A religious person, (2) Not a religious person, (3) A dedicated atheist?

Unit of measure: percent

Source of data: World Values Survey, http://www.worldvaluessurvey.org/WVSOnline.jsp – http://www.europeansocialsurvey.org/

INDICATORS USED FOR NORMATIVE STANDARD CARE – SELF-RELIANCE DIMENSION
(proactive, policy sensitivity: yes)

18. Mean years of schooling (direction: positive, weight: 3.33%)

Definition: Average number of years of education received by people ages 25 and older, converted from education attainment levels using official durations for each level.

Unit of measure: years

Source of data: UNDP, http://hdr.undp.org/en/indicators/103006

19. Unemployment rate (direction: negative, weight: 3.33%)

Definition: The unemployment rate is the number of unemployed people as a percentage of the labor force, where the latter consists of the unemployed plus those in paid or self-employment. Unemployed people are those who report that they are without work, but that they are available for work and that they have taken active steps to find work in the last four weeks.

Unit of measure: percent

Source of data: OECD, https://stats.oecd.org/Index.aspx?DataSetCode=LFS_SEXAGE_I_R

20. Life expectancy (mix) (direction: positive, weight: 3.33%)

Definition: Life expectancy at birth is defined as how long, on average, a newborn can expect to live, if current death rates do not change. The indicator is calculated as the product of the long term change (2010 to 2017) and the distance to the maximum of the current value.

Unit of measure: percent

Source of data: OECD, https://stats.oecd.org/sdmx-json/data/DP_LIVE/.LIFEEXP.../OECD?contentType=csv&detail=code&separator=comma&csv-lang=en

INDICATORS USED FOR NORMATIVE STANDARD CARE – MATERIAL ADVANCEMENT DIMENSION
(active, policy sensitivity: no)

21. Household expenditure (direction: positive, weight: 3.33%)

Definition: Household spending is the amount of final consumption expenditure made by resident households to meet their everyday

needs, such as food, clothing, housing (rent), energy, transport, durable goods (notably cars), health costs, leisure, and miscellaneous services. The indicator shows the latter's expenditure relative to GDP.

Unit of measure: percent of GDP

Source of data: OECD, https://stats.oecd.org/Index.aspx?DataSetCode=SNA_TABLE5

22. Child relative income poverty rate (direction: negative, weight: 3.33%)

Definition: The percentage of children (0-17 year-olds) with an equivalized household disposable income (i.e. an income after taxes and transfers adjusted for household size) below the poverty threshold. The poverty threshold is set here at 50% of the median disposable income in each country.

Unit of measure: percent of population 0-17 years old

Source of data: OECD, http://www.oecd.org/els/soc/CO_2_2_Child_Poverty.xlsx

23. GDP/capita (mix) (direction: positive, weight: 3.33%)

Definition: Gross domestic product (GDP) is the standard measure of value added created through the production of goods and services in a country during a certain period. The indicator is calculated as the product of long term change (2010 to 2017) and the distance from the OECD average of the current value in USD.

Unit of measure: percent

Source of data: OECD, https://stats.oecd.org/Index.aspx?DataSetCode=SNA_TABLE1

INDICATORS USED FOR NORMATIVE STANDARD BALANCE – WELLBEING & GENERATIVITY DIMENSION
(proactive, policy sensitivity: no)

24. Transition of educational attainment level from parents to current adults (direction: positive, weight: 2%)

Definition: Transition from the previous generation – from the pre-primary, primary and lower secondary education of parents to tertiary education.

Unit of measure: percent

Source of data: Eurostat, http://appsso.eurostat.ec.europa.eu/nui/show.do?lang=en&dataset=ilc_igtp01

25. Fertility (mix) (direction: positive, weight: 2%)

Definition: The total fertility rate in a specific year is defined as the total number of children that would be born to each woman if she were to live to the end of her child-bearing years and give birth to children in alignment with the prevailing age-specific fertility rates. The indicator is calculated as the product of the long term change (2010 to 2017) and the distance to the OECD average of the current value.

Unit of measure: percent

Source of data: OECD, https://stats.oecd.org/viewhtml.aspx?datasetcode=HEALTH_DEMR&lang=en#

26. Age dependency (direction: negative, weight: 2%)

Definition: The proportion of dependents (people younger than 15 or older than 64) to the working-age population (15-64).

Unit of measure: percent of working-age population

Source of data: WB, https://data.worldbank.org/indicator/SP.POP.DPND

27. Antidepressant usage (direction: negative, weight: 2%)

Definition: Antidepressant drugs consumption in DDD. Defined daily dose (DDD) is the assumed average maintenance dose per day for a drug used following its main indication for an adult.

Unit of measure: Defined daily dosage per 1 000 people per day

Source of data: OECD, Health statistics, http://dx.doi.org/10.1787/888933605540

28. Gini-coefficient (income) (direction: negative, weight: 2%)

Definition: The Gini index measures the extent to which the distribution of income (or, in some cases, consumption expenditure) among individuals or households within an economy deviates from a perfectly equal distribution. A Lorenz curve plots the cumulative percentages of total income received against the cumulative number of recipients, starting with the poorest individual or household. The Gini index measures the area between the Lorenz curve and a hypothetical line of absolute equality, expressed as a percentage of the maximum area under the line. Thus, a Gini index of 0 represents perfect equality, while an index of 100 implies perfect inequality.

Unit of measure: 0-100

Source of data: OECD, https://data.oecd.org/inequality/income-inequality.htm

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PART II

SOCIAL FUTURING INDEX – REPORT 2020

OVERVIEW

The analysis of OECD countries' overall SFI rankings shows that the top three countries are Canada, Australia, and Norway, while the bottom three are Portugal, Japan, and Mexico. For easier comparison, we have ranked all countries into four quartiles (Q1, Q2, Q3, and Q4) based on their level of social futuring.

Considering countries in Group Q1, the difference in the score between the first (Canada) and the eighth (here Poland and Hungary are in a draw) ranges from 70 to 52.6 points. Besides Canada and Australia, Group Q1 is made up of most of the Scandinavian countries (Norway, Iceland, Denmark, Finland, excluding Sweden) as well as some East-Central European countries (Estonia, Poland, and Hungary).

As for country Group Q2, a much smaller range of overall scores (between 50 and 52) can be observed. The frontrunners of Group Q2 are Sweden, the Slovak Republic, and New Zealand in a triple tie (with scores of 52). The Group ends with Latvia, the Netherlands and Germany (with scores close to 50). Austria, Lithuania, and Slovenia are situated between these two poles in Group Q2.

The SFI scores of countries in Group Q3 are wider range of scores (between 43 and 49). The two frontrunners in Group Q3 are Ireland and Switzerland (with scores close to 49) while the countries finishing last within the group are Belgium and Chile (with scores close to 43). As far as the composition of Group Q3 is concerned, besides the one East-Central European country (the Czech Republic) and three non-European countries (USA, Israel and Chile), the group is comprised of mostly Western-European countries (Ireland, Switzerland, Luxembourg, the United Kingdom, and Belgium).

Regarding Group Q4, a relatively wide range of scores is visible (between 36-43). Greece and France are the two leaders of Group Q4 (with scores close to 42), with Mexico coming in last with a score of 35.6. The frontrunner countries in Group Q4 are followed by a subgroup

of 40-41-score countries, namely Korea, Italy, Turkey, and Spain. Just surpassing the last country (Mexico), two countries (Portugal and Japan) with scores of 38 can be found.

Chapter I.2. reviews the country rankings based on the SFI's four normative standards: Peace & Security, Attachment, Care, and Balance.

Chapter II reviews the SFI rankings of the examined 36 countries based on groupings of alternative measures, which can be thought of as being correlated to social futuring, such as: country size as measured by population, country size as measured by area, GDP/head and population density.

Finally, the tables of the OECD countries' SFI ranking for each dimension can be found in the appendix.

I. KEY FINDINGS AND HIGHLIGHTS

I.1. OECD countries' overall SFI ranking

No		Country	SFI
1	Q1	Canada	70.0
2		Australia	62.7
3		Norway	61.3
4		Iceland	59.6
5		Denmark	54.9
6		Finland	54.0
7		Estonia	53.4
8		Poland	52.6
8		Hungary	52.6
10	Q2	Sweden	52.0
10		Slovak Republic	52.0
10		New Zealand	52.0
13		Austria	51.3
14		Lithuania	51.0
15		Slovenia	50.7
16		Latvia	50.0
16		Netherlands	50.0
18		Germany	49.9
19	Q3	Ireland	49.1
20		Switzerland	48.7
21		Czech Republic	47.3
22		United States	46.8
23		Luxembourg	46.4
24		Israel	44.7
25		United Kingdom	43.6
26		Belgium	43.5
27		Chile	43.2
28	Q4	Greece	42.8
29		France	41.6
30		Korea	41.1
31		Italy	40.8
32		Turkey	40.7
33		Spain	39.8
34		Portugal	38.5
35		Japan	38.1
36		Mexico	35.6

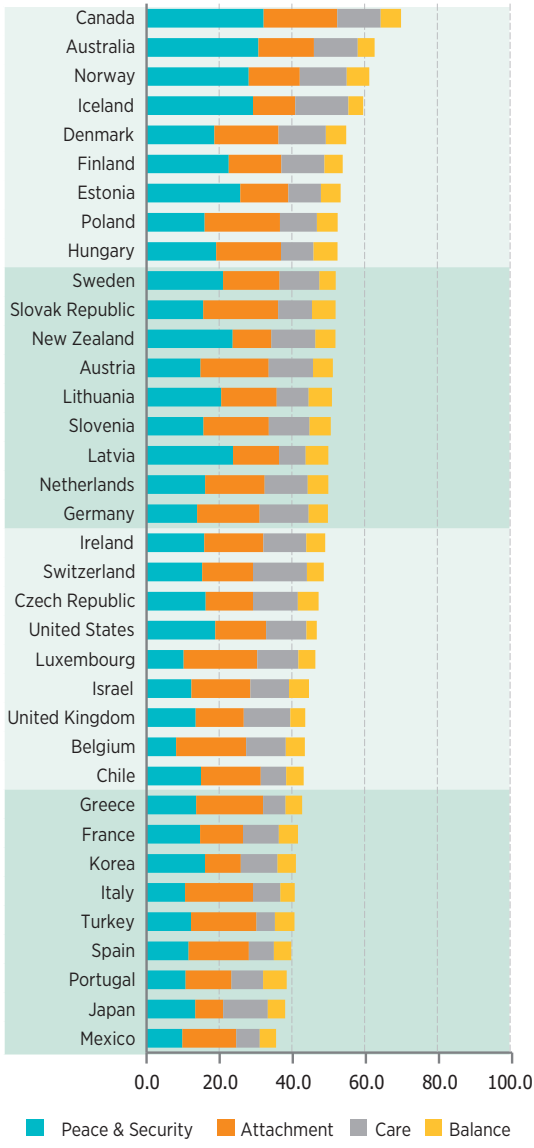

Figure 6:
OECD countries' overall SFI ranking

Analysis of OECD countries' overall SFI ranking shows that the top three countries are Canada, Australia, and Norway, while the bottom three are Portugal, Japan, and Mexico. As for the range of the SFI, the maximum achievable score is 100 points, out of which the top country (Canada) scores 70 points, while the bottom country (Mexico) achieves 35.6 points. This range of values shows that there are significant differences between leading and lagging countries. There are instances, however, when only marginal differences can be seen between countries (allowing for the possibility of draws due to equal scores).

For easier comparison, we ranked the countries into four quartiles (Q1, Q2, Q3, and Q4) based on their level of social futuring. The most futurable countries belong to the first quartile (Q1), the less futurable ones to the second (Q2), even less futurable ones to the third (Q3), and the least futurable ones to the fourth (Q4). In other words, countries in Q4 have the most work to do if they wish to improve their futurability, and these burdens gradually decrease as we approach the countries in Q1.

Considering the countries in Group Q1, the score between the first (Canada) and the eighth (Poland and Hungary are tied) ranges from 70 to 52.6 points. Besides Canada and Australia, Group Q1 is made up of almost all of the Scandinavian countries (Norway, Iceland, Denmark, Finland, excluding Sweden), as well as some East-Central European countries (such as Estonia, Poland, and Hungary). Within Group Q1, Canada – with its score of 70 – leads the field by far, while the country grouping that follows – made up of Australia, Norway, and Iceland – score between 60 and 63, with the rest of the countries in Group Q1 scoring between 53-55.

As for country Group Q2, a much smaller range of overall scores (between 50 and 52) can be observed. The frontrunners of this group are Sweden, the Slovak Republic, and New Zealand in a triple tie (with scores of 52). The group ends with Latvia, the Netherlands, and Germany (with scores close to 50). Austria, Lithuania, and Slovenia are situated between the two poles. Within Group Q2 one can find mostly East-Central European countries in the company of Sweden, the Netherlands, and Germany, as well as a non-European state, New Zealand.

The SFI scores of Group Q3 countries range more widely (between 43 and 49). The two frontrunners in this group are Ireland and Switzerland (with scores close to 49), while the countries finishing last within the group are Belgium and Chile (with scores close to 43). As far as the composition of Group Q3 is concerned, besides the one East-Central European country (the Czech Republic) and three non-European countries (USA, Israel and Chile), the group is comprised of mostly Western-European countries (Ireland, Switzerland, Luxembourg, United Kingdom, and Belgium).

Regarding Group Q4, a relatively wide range of scores is visible (between 36-43). Greece and France are the two leaders of the group (with scores of around 42), with Mexico coming in last, scoring 35.6. The frontrunner countries are followed by a subgroup of countries with scores of 40-41, namely Korea, Italy, Turkey, and Spain. Just in front of the last country (Mexico), two countries (Portugal and Japan) with scores of 38 can be found.

In order to gain deeper understanding of the OECD countries' overall SFI ranking, we have to consider the country rankings based on each of the four normative standards, the backbone of the SFI.

I.2. Rankings of the OECD countries by normative standards

I.2.1. Peace & Security

No		Country	SFI
1	Q1	Canada	32.2
2		Australia	30.8
3		Iceland	29.3
4		Norway	28.1
5		Estonia	25.8
6		Latvia	23.8
7		New Zealand	23.7
8		Finland	22.6
9		Sweden	21.0
10	Q2	Lithuania	20.6
11		Hungary	19.2
12		United States	18.9
13		Denmark	18.7
14		Czech Republic	16.3
15		Netherlands	16.1
15		Korea	16.1
17		Poland	16.0
18		Ireland	15.9
19	Q3	Slovenia	15.7
20		Slovak Republic	15.6
21		Switzerland	15.3
22		Chile	15.0
23		Austria	14.9
24		France	14.7
25		Germany	13.9
26		Greece	13.7
27		United Kingdom	13.5
28	Q4	Japan	13.4
29		Israel	12.3
30		Turkey	12.2
31		Spain	11.6
32		Portugal	10.7
33		Italy	10.6
34		Luxembourg	10.2
35		Mexico	9.9
36		Belgium	8.2

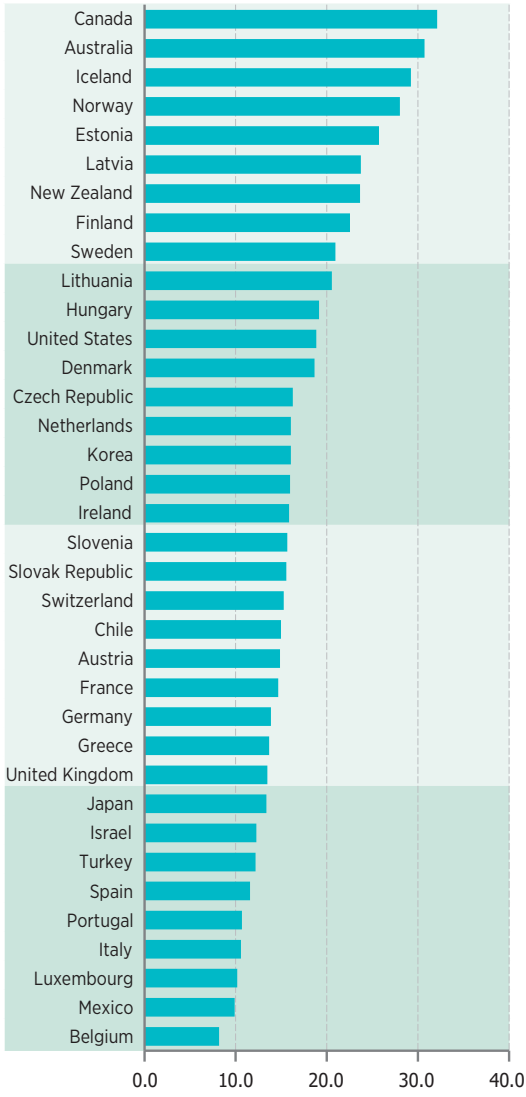

Figure 7:
Rankings of OECD countries based on the
"Peace & Security" normative standard

The normative standard entitled Peace & Security is the most fundamental element of the Social Futuring Index, considering that it provides the substance of a good life in a unity of order in different senses. Its importance is reflected in its 40% weight in the SFI, and it involves both the internal and the external aspects of safety, the latter which can be secured for a given country by either creating it themselves, or by having membership in a military alliance system. In order to conceptualize and measure the level of Peace & Security, we identified the following three dimensions: Defense & Safety, Assets, and Functionality.

As a result, out of the 40 points achievable, Canada, Australia, and Iceland – the top three countries – obtained 32.2, 30.8, and 29.3 points respectively. The lowest scores belong to Luxembourg, Mexico, and Belgium, which achieved 10.2, 9.9, and 8.2 points respectively. Countries obtaining at least 20 points may be regarded as the safest in terms of the different aspects of the Peace & Security normative standard. These are the countries that belong to Group Q1, plus Lithuania from Group Q2. The performance of countries achieving at least 15 points (belonging to Group Q2 and the first four places in Group Q3) can be regarded as basically satisfying. The rest of the countries can be expected to make a special effort to improve their diverse – internal and external – Peace & Security capacities to provide firm foundations for developing their social futuring in the long term.

I.2.2. Attachment

No		Country	SFI
1	Q1	Poland	20.7
2		Slovak Republic	20.6
3		Canada	20.3
4		Luxembourg	20.2
5		Belgium	19.3
6		Austria	18.7
6		Italy	18.7
8		Greece	18.4
9		Turkey	18.0
9		Slovenia	18.0
11	Q2	Hungary	17.8
12		Denmark	17.7
13		Germany	17.2
14		Spain	16.6
15		Chile	16.4
15		Netherlands	16.4
17		Ireland	16.3
18		Israel	16.2
19	Q3	Sweden	15.5
20		Australia	15.3
20		Lithuania	15.3
22		Mexico	14.8
23		Finland	14.5
24		Norway	14.1
25		United States	14.0
25		Switzerland	14.0
27		United Kingdom	13.2
27		Estonia	13.2
29	Q4	Czech Republic	13.0
30		Latvia	12.7
31		Portugal	12.6
32		France	11.8
33		Iceland	11.6
34		New Zealand	10.7
35		Korea	9.9
36		Japan	7.7

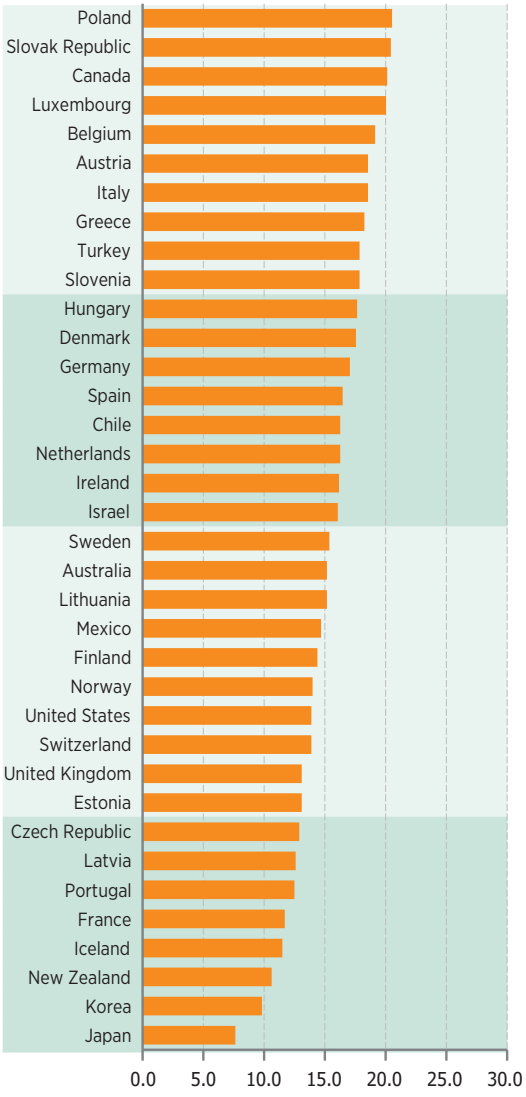

Figure 8:
Rankings of OECD countries based on the
"Attachment" normative standard

The normative standard entitled Attachment is also a crucial element of the Social Futuring Index, since it is essential for healthy bodily, mental, intellectual and spiritual human development. Its importance is reflected in its 30% weight in constructing the SFI, and it involves aspects of real-life and transcendental belonging to smaller and larger communities, such as primary, national, religious and other social groups. In order to conceptualize and measure its level, we identified the following three dimensions: Patriotism, Family, and Spirituality.

As a result, out of the maximum achievable score of 30, Poland, the Slovak Republic, and Canada – the top three countries – obtained scores of 20.7, 20.6, and 20.3, respectively. The lowest scores belong to New Zealand, Korea, and Japan, which achieved scores of 10.7, 9.9, and 7.7, respectively. The first twelve countries obtained close to 18 points or over, including the countries of Group Q1 and three others from Group Q2. Based on their results we may consider these countries the most cohesive and integrated ones in terms of the different mechanisms of Attachment. The performance of countries achieving at least (rounded) 13 points (belonging to Groups Q2, Q3 and the first four places in Group Q4) can be regarded as basically satisfying: however, there is significant room for further improvement in their cases. Countries occupying the last five positions can be expected to make a special effort to improve the performance of their citizens in terms of their belonging to diverse communities.

I.2.3. Care

No		Country	SFI
1	Q1	Switzerland	14.8
2		Iceland	14.6
3		Germany	13.5
4		Denmark	13.0
5		Norway	12.9
6		United Kingdom	12.8
7		Czech Republic	12.4
8		Japan	12.3
9		Austria	12.2
10	Q2	New Zealand	12.1
10		Australia	12.1
12		Canada	11.9
12		Finland	11.9
14		Ireland	11.8
14		Netherlands	11.8
16		Luxembourg	11.3
17		Slovenia	11.2
18		United States	11.1
19	Q3	Sweden	11.0
20		Belgium	10.9
21		Israel	10.6
22		Poland	10.1
22		Korea	10.1
24		France	9.8
25		Slovak Republic	9.3
26		Hungary	9.0
27		Estonia	8.9
28	Q4	Lithuania	8.8
29		Portugal	8.7
30		Italy	7.5
31		Latvia	7.3
32		Chile	7.0
33		Spain	6.9
34		Mexico	6.5
35		Greece	6.2
36		Turkey	5.1

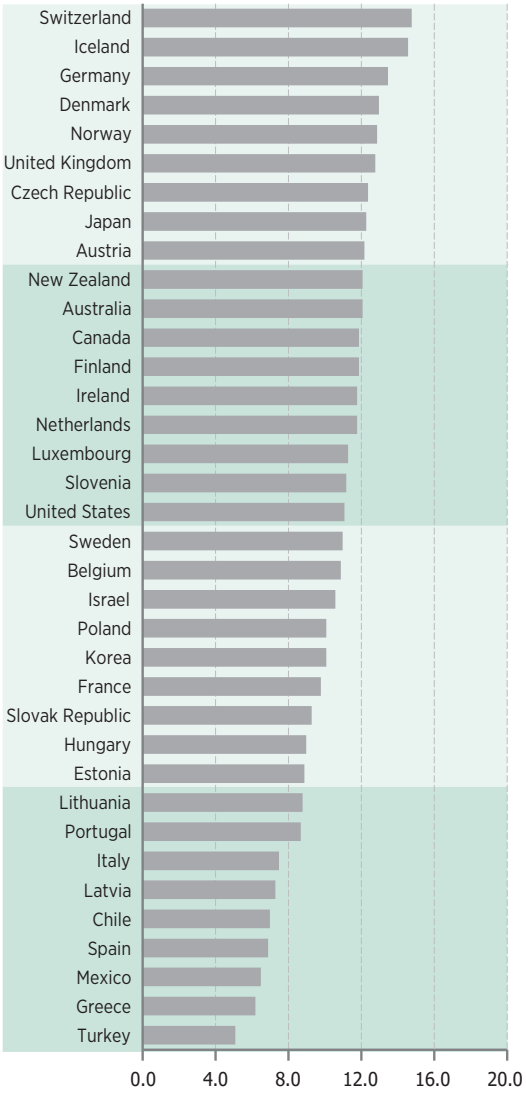

Figure 9:
Rankings of OECD countries based on the "Care" normative standard

The normative standard entitled Care (Material Advancement and Freedom) covers the abilities of self-reliance and self-determination to actualize one's potential and capacity to control one's own fate. Its relevance is reflected in its 20% weight in constructing the SFI, and it involves aspects of human capital, labor, child poverty, household expenditure, GDP and life prospects. In order to make it measurable, we defined two dimensions: Self-reliance and Material advancement.

In terms of the ranking based on this normative standard, out of the achievable 20 points Switzerland, Iceland, and Germany – the top three countries – obtained scores of 14.8, 14.6, and 13.5 respectively. The lowest scores belong to Mexico, Greece, and Turkey, which received 6.5, 6.2, and 5.1 scores respectively. The first fifteen countries obtained close to 12 points or more, including the countries of Group Q1 and six others from Group Q2. According to their measured performance, these countries can be considered the most materially developed states, which enables them to provide the highest level of Care for themselves. The performance of countries achieving scores of (a rounded) 8 and 12 (belonging to Groups Q2 and Q3 and the first three places in Group Q4) can be regarded as satisfying: however, there is much opportunity for further development in their case. The last six countries that obtained scores of less than or close to 7 can be expected to make the most efforts to improve the provision of a good life for their citizens as a material foundation of social futuring.

I.2.4. Balance

No		Country	SFI
1	Q1	Hungary	6.6
2		Slovak Republic	6.5
2		Portugal	6.5
4		Lithuania	6.4
5		Latvia	6.2
5		Norway	6.2
7		Slovenia	5.9
8		Poland	5.7
8		Czech Republic	5.7
8		Netherlands	5.7
11	Q2	Denmark	5.6
11		Canada	5.6
13		New Zealand	5.5
13		Austria	5.5
13		Israel	5.5
13		Estonia	5.5
17		Turkey	5.4
18		Germany	5.3
18		France	5.3
20	Q3	Belgium	5.2
20		Ireland	5.2
22		Korea	5.1
23		Finland	5.0
24		Chile	4.8
24		Spain	4.8
24		Japan	4.8
27		Luxembourg	4.7
28	Q4	Australia	4.6
28		Switzerland	4.6
28		Greece	4.6
31		Sweden	4.5
31		Mexico	4.5
33		United Kingdom	4.1
33		Iceland	4.1
35		Italy	4.0
36		United States	2.9

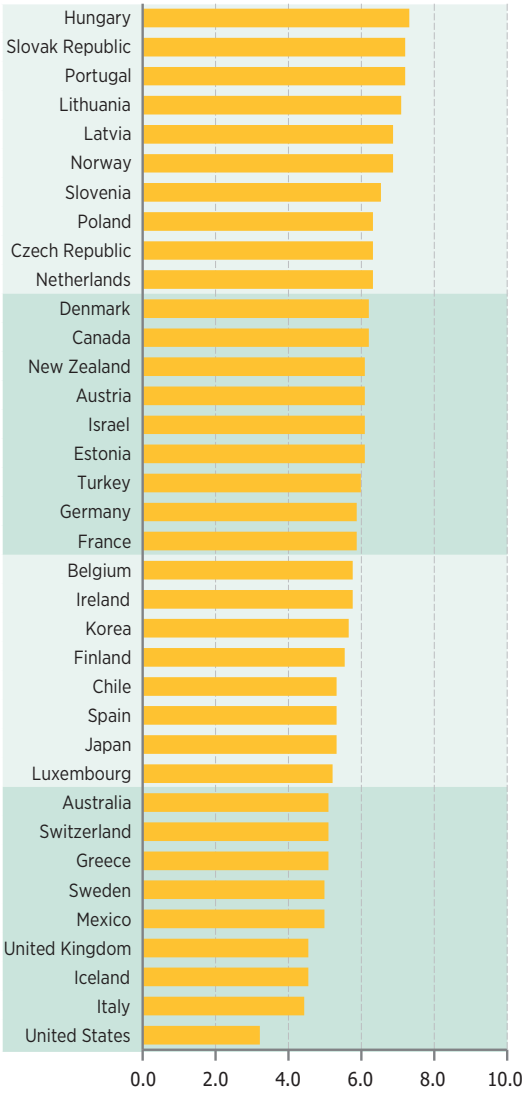

Figure 10:
Rankings of OECD countries based on the "Balance" normative standard

Finally, the normative standard entitled Balance refers to real and perceived community states that are free from excessive social comparisons (such as envy) and reflects the importance of intergenerational commitments. The role of Balance as a normative standard is reflected in its 10% weight in constructing the SFI; it involves aspects of fertility and age-dependency, as well as social inequalities. As for its measurement, we identified one dimension we call Wellbeing & Generativity.

Considering the ranking based on Balance, out of the maximum 10 points Hungary, the Slovak Republic, and Portugal – the top three countries – obtained scores of 6.6, 6.5, and 6.5 respectively. The lowest scores belong to the United Kingdom, Iceland, Italy, and the United States, receiving 4.1, 4.1, 4.0 and 2.9 scores respectively. Since differences between countries are marginal in the normative standard Balance, they can be classified into only two subgroups, depending on whether they achieve scores more or less than 5.0 points. The first group contains 23, while the second contains 13 countries. Countries belonging to the second group (with scores of under 5.0) can be expected to make more efforts to create a more balanced social order.

II. OECD countries' overall SFI rankings grouped according to categories

II.1. OECD countries' rankings based on their population

(capita)

Category 1 0 to 6m			Category 2 6m to 25m			Category 3 over 25m		
1	Norway	61.3	1	Australia	62.7	1	Canada	70.0
2	Iceland	59.6	2	Hungary	52.6	2	Poland	52.6
3	Denmark	54.9	3	Sweden	52.0	3	Germany	49.9
4	Finland	54.0	4	Austria	51.3	4	United States	46.8
5	Estonia	53.4	5	Netherlands	50.0	5	United Kingdom	43.6
6	Slovak Republic	52.0	6	Switzerland	48.7	6	France	41.6
6	New Zealand	52.0	7	Czech Republic	47.3	7	Korea	41.1
8	Lithuania	51.0	8	Israel	44.7	8	Italy	40.8
9	Slovenia	50.7	9	Belgium	43.5	9	Turkey	40.7
10	Latvia	50.0	10	Chile	43.2	10	Spain	39.8
11	Ireland	49.1	11	Greece	42.8	11	Japan	38.1
12	Luxembourg	46.4	12	Portugal	38.5	12	Mexico	35.6

Table 2:
OECD countries' rankings based on their population

OECD countries were divided based on population into three categories: 0 to 6 million, 6 to 25 million, and more than 25 million people. It is generally thought that the size of a country based on population has a direct impact on the socio-economic performance of a country.

The SFI ranking of the most populated OECD countries (category 3) shows the top three positions occupied by Canada, Poland, and Germany and the bottom three by Spain, Japan, and Mexico. It is noteworthy that this category of high population countries comprises not only a group of diverse countries from America, Europe, and Asia, but also the two countries with extreme scores on the SFI ranking list: Canada on top and Mexico at the bottom. SFI scores range between 35.6 and 70 points.

In the group of medium-sized countries based on population (category 2) one can find Australia, Hungary, and Sweden at the top and Chile, Greece, and Portugal at the bottom of the SFI rankings list. Here, the SFI score range

is slightly smaller compared to the highly populated countries in category 3, from 38.5 (Portugal) to 62.7 (Australia), but still, the range remains quite wide.

Norway, Iceland, and Denmark (all Q1 countries) are at the top of the least populated country group (category 1), whereas Latvia, Ireland, and Luxembourg are at the bottom. The SFI scores range between 46.4 (Luxembourg) and 61.3 (Norway). Category 1 is a homogeneous category in terms of geography, as it contains European countries only, with New Zealand being the only exception.

None of the most populated OECD countries (the USA, Japan, Mexico, Germany and Turkey) are present in the top quartile (Group Q1) of the SFI ranking; three of the most populated OECD countries (Mexico, Japan, and Turkey) scored in the bottom quartile (Group Q4). Although Iceland, Luxembourg and Estonia have the smallest populations among OECD countries, two of them (Iceland and Estonia) placed in the top quartile (Group Q1) of the overall SFI rankings list.

II.2. OECD countries' ranking based on their GDP per capita

(USD)

Category 1 0 to 40,000			Category 2 40,000 to 50,000			Category 3 over 50,000		
1	Estonia	53.4	1	Finland	54.0	1	Canada	70.0
2	Poland	52.6	2	New Zealand	52.0	2	Australia	62.7
2	Hungary	52.6	3	Czech Republic	47.3	3	Norway	61.3
4	Slovak Republic	52.0	4	Israel	44.7	4	Iceland	59.6
5	Lithuania	51.0	5	United Kingdom	43.6	5	Denmark	54.9
6	Slovenia	50.7	6	France	41.6	6	Sweden	52.0
7	Latvia	50.0	7	Korea	41.1	7	Austria	51.3
8	Chile	43.2	8	Italy	40.8	8	Netherlands	50.0
9	Greece	42.8	9	Spain	39.8	9	Germany	49.9
10	Turkey	40.7	10	Japan	38.1	10	Ireland	49.1
11	Portugal	38.5				11	Switzerland	48.7
12	Mexico	35.6				12	United States	46.8
						13	Luxembourg	46.4
						14	Belgium	43.5

Table 3:
OECD countries' ranking based on their GDP per capita

GDP per capita, a monetary measure that divides all goods and services produced during a certain period of time by the country's total population, is a widely used measure for quantifying economic wealth. The potential values of the measure are divided into three categories (0 to 40,000 USD, 40,000 to 50,000 USD, and 50,000 USD or more), allowing rankings to be created within low, medium and high wealth country categories.

In the high wealth group (category 3), Canada, Australia, and Norway are the three frontrunners, with the United States, Luxembourg, and Belgium finishing last.

In the medium wealth group (category 2), Finland, New Zealand, and the Czech Republic occupy the three top positions, whereas Italy, Spain, and Japan (the latter all being Q4 countries) occupy the last places.

In the low wealth group (category 1), the top three countries are Estonia, Poland, and Hungary, whereas Turkey, Portugal, and Mexico occupy the last places.

It is interesting to note that of the top-five wealthiest OECD countries in terms of GDP per capita – Luxembourg, Ireland, Switzerland, Norway, and the USA – only one (Norway) achieved a place in the top quartile (Group Q1) of the overall SFI ranking. On the other end, Mexico, Chile, Turkey, Greece, and Hungary have the lowest GDP per capita among OECD countries, but only three of the five – Mexico, Turkey, and Greece – are located in the bottom quartile (Group Q4) of the overall SFI ranking. We can therefore conclude that wealth (as measured by GDP per capita) is not correlated with social futuring (as measured by the SFI).

II.3. OECD countries' rankings based on their area size

(km²)

Category 1 0 to 75,000			Category 2 75,000 to 300,000			Category 3 over 300,000		
1	Denmark	54.9	1	Iceland	59.6	1	Canada	70.0
2	Estonia	53.4	2	Hungary	52.6	2	Australia	62.7
3	Slovak Republic	52.0	3	New Zealand	52.0	3	Norway	61.3
4	Lithuania	51.0	4	Austria	51.3	4	Finland	54.0
5	Slovenia	50.7	5	Czech Republic	47.3	5	Poland	52.6
6	Latvia	50.0	6	United Kingdom	43.6	6	Sweden	52.0
6	Netherlands	50.0	7	Greece	42.8	7	Germany	49.9
8	Ireland	49.1	8	Korea	41.1	8	United States	46.8
9	Switzerland	48.7	9	Italy	40.8	9	Chile	43.2
10	Luxembourg	46.4	10	Portugal	38.5	10	France	41.6
11	Israel	44.7				11	Turkey	40.7
12	Belgium	43.5				12	Spain	39.8
						13	Japan	38.1
						14	Mexico	35.6

Table 4:
OECD countries' rankings based on their area size

OECD countries were divided into three categories based on their geographical size, as measured by area (square kilometers): 0 to 75,000 km², 75,000 to 300,000 km², and 300,000 km² or more. Countries were ranked by their SFI scores within the three resulting groups: large, medium, and small countries. We can observe that within the top quartile of the SFI rankings (Group Q1), two (Canada and Australia) are among the largest countries in the world.

In the large country group (category 3), the top three countries are Canada, Australia, and Norway, while Spain, Japan, and Mexico are located at the bottom of the SFI rankings list. Canada's top position and Mexico's last position is repeated in this size-related category (as measured by km² area) in the same way as in the SFI rankings of the largest countries as measured by their population.

Among the medium-sized countries as measured by km^2 area (category 2), the top of the list includes Iceland, Hungary, and New Zealand, whereas the bottom of the list includes Korea, Italy, and Portugal. Portugal finds itself in last place in the medium-sized country group (category 2), just as in the population-based rankings.

Among small-sized countries (category 1), the highest scores belong to Denmark, Estonia, and the Slovak Republic; the lowest scores belong to Luxembourg, Israel, and Belgium.

It is interesting to note that one of the largest countries in the world (the USA) is located in a surprisingly low position in the SFI ranking list. Mexico, one of the world's 15 largest countries, is at the bottom of the overall SFI ranking. Of the small-sized countries in terms of km^2 area (category 1), only Denmark and Estonia are positioned in the top quartile (Group Q1) of the SFI rankings list, but none of these small-sized countries can be found in the bottom quartile (Group Q4).

II.4. OECD countries' rankings based on their population density

(capita/km^2)

Category 1 0 to 50			Category 2 50 to 125			Category 3 over 125		
1	Canada	70.0	1	Poland	52.6	1	Denmark	54.9
2	Australia	62.7	2	Hungary	52.6	2	Netherlands	50.0.
3	Norway	61.3	3	Slovak Republic	52.0	3	Germany	49.9
4	Iceland	59.6	4	Austria	51.3	4	Switzerland	48.7
5	Finland	54.0	5	Slovenia	50.7	5	Czech Republic	47.3
6	Estonia	53.4	6	Ireland	49,1	6	Luxembourg	46.4
7	Sweden	52.0	7	Greece	42.8	7	Israel	44.7
8	New Zealand	52.0	8	France	41.6	8	United Kingdom	43.6
9	Lithuania	51.0	9	Turkey	40.7	9	Belgium	43.5
10	Latvia	50.0	10	Spain	39.8	10	Korea	41.1
11	United States	46.8	11	Portugal	38.5	11	Italy	40.8
12	Chile	43.2	12	Mexico	35.6	12	Japan	38.1

Table 5:
OECD countries' rankings based on population density categories

OECD countries were also divided into three categories based on their population density: 0 to 50 inhabitants per km^2, 50 to 125 per km^2, and 125 inhabitants per km^2 or more. Three groups of countries were constructed containing high, medium and low population density countries.

The highest population density countries (category 3) are led by Denmark, the Netherlands and Germany. Korea, Italy, and Japan are placed last in this group.

The medium population density countries (category 2) are led by Poland and Hungary (which are tied), plus the Slovak Republic, whereas Spain, Portugal, and Mexico place last.

Among low population density countries (category 1), Canada, Australia, and Norway lead the group, with Latvia, the United States, and Chile placing last.

It is interesting to note that none of the top five countries with the highest population density (Korea, the Netherlands, Israel, Belgium, and Japan) are placed in the top quartile (Group Q1) of the SFI rankings list, whereas the bottom quartile (Group Q4) of the SFI rankings list includes two of them: Korea and Japan. As for the OECD countries with the lowest population density (Iceland, Australia, and Canada are the most notable ones) we find both Australia and Canada leading the top quartile of the overall SFI rankings list.

APPENDIX: *SFI Ranking Tables by Dimensions*

No		Country	SFI
1	Q1	Korea	75.3
2		Norway	72.1
3		Estonia	67.5
4		Australia	67.4
5		Japan	65.7
6		Czech Republic	64.9
7		Poland	64.6
8		Lithuania	64.3
9		Switzerland	64.1
10	Q2	Finland	63.0
11		Slovak Republic	62.2
12		Iceland	62.1
13		Slovenia	61.9
14		New Zealand	61.3
15		Hungary	61.0
16		Israel	60.8
16		United States	60.8
18		Latvia	60.5
19	Q3	Denmark	60.1
20		Greece	57.6
21		Netherlands	57.0
22		Canada	56.2
23		Austria	54.7
24		Portugal	53.4
25		Luxembourg	53.0
26		Germany	52.4
27		Turkey	51.1
28	Q4	Ireland	50.2
29		Sweden	47.9
30		Italy	47.6
31		France	34.9
32		United Kingdom	34.5
33		Chile	32.1
34		Spain	27.7
35		Belgium	22.0
36		Mexico	3.0

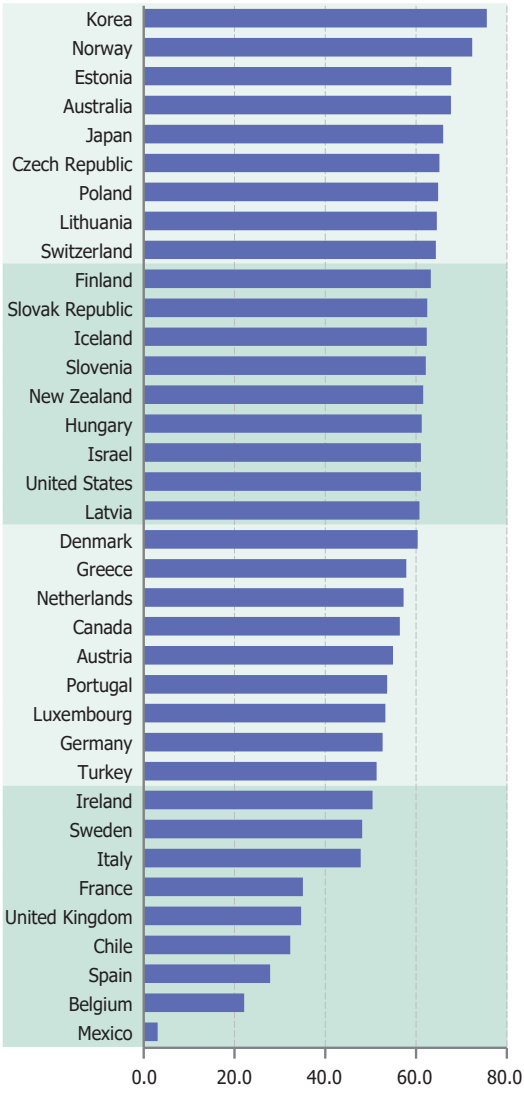

Figure 11:
Defense & Safety

No		Country	SFI
1	Q1	Canada	100.0
2		Australia	89.0
3		Iceland	75.2
4		Norway	72.4
5		New Zealand	64.6
6		Latvia	60.9
7		Finland	59.9
8		Estonia	59.7
9		Sweden	52.8
10	Q2	Lithuania	47.6
11		Chile	45.6
12		United States	43.4
13		Hungary	40.6
14		Denmark	39.8
15		Mexico	37.3
15		Slovak Republic	32.7
17		Poland	31.7
18		Slovenia	30.9
19	Q3	France	30.5
20		Czech Republic	28.6
21		Greece	25.7
22		Austria	25.4
23		Turkey	24.7
24		Spain	24.2
25		Ireland	23.5
26		United Kingdom	23.4
27		Netherlands	23.2
28	Q4	Switzerland	21.7
29		Portugal	20.6
30		Germany	20.3
31		Italy	17.2
32		Israel	12.4
33		Japan	11.1
34		Belgium	10.6
35		Korea	9.1
36		Luxembourg	6.7

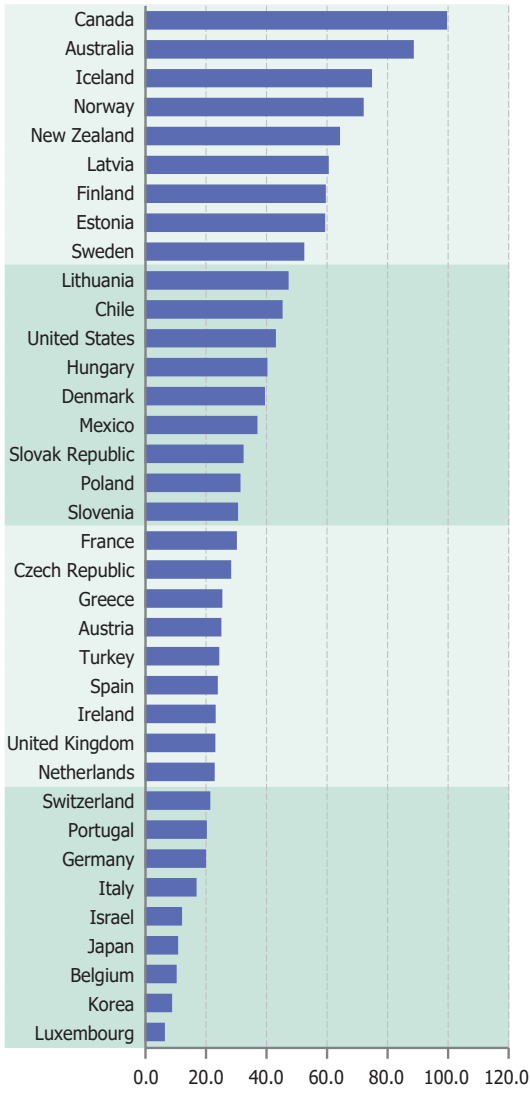

Figure 12:
Assets

No		Country	SFI
1	Q1	Iceland	80.4
2		Estonia	71.1
3		Korea	67.3
4		Canada	65.9
5		Norway	64.1
6		Australia	62.5
7		Ireland	61.6
8		Netherlands	58.0
9		Sweden	56.9
10	Q2	Latvia	55.7
11		United Kingdom	53.9
12		France	51.5
13		Hungary	49.4
14		Denmark	46.8
15		Japan	46.3
15		New Zealand	46.3
17		Germany	46.2
18		Lithuania	46.1
19	Q3	Switzerland	45.7
20		Finland	43.3
21		Austria	43.2
22		United States	41.5
23		Czech Republic	40.5
24		Spain	39.4
25		Belgium	38.4
26		Israel	37.8
27		Luxembourg	35.8
28	Q4	Slovenia	33.1
29		Poland	31.9
30		Slovak Republic	28.2
31		Greece	27.8
32		Chile	26.8
33		Italy	23.9
34		Turkey	21.8
35		Mexico	21.1
36		Portugal	12.7

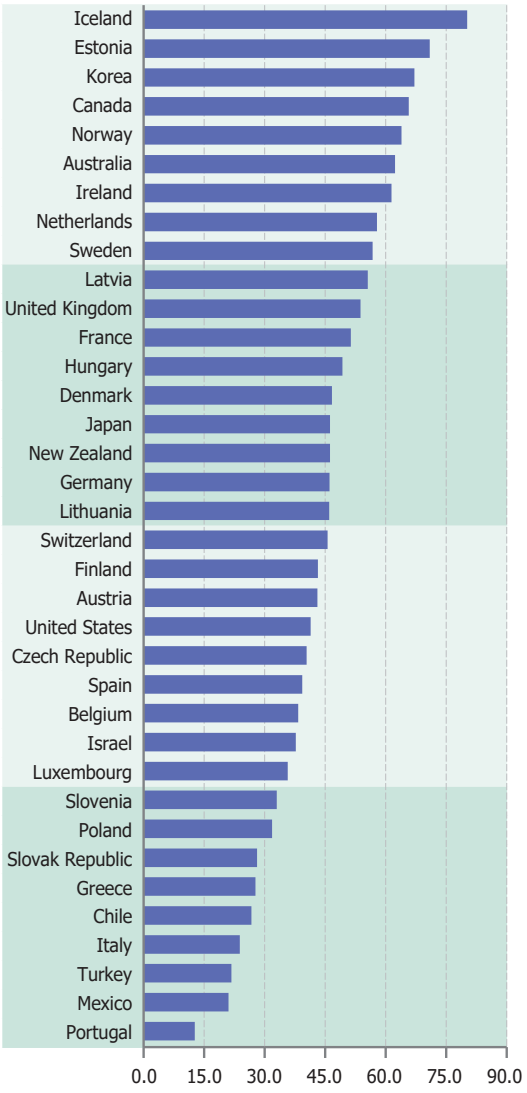

Figure 13:
Functionality

No		Country	SFI
1	Q1	Australia	95.7
2		Sweden	87.5
3		Belgium	84.8
4		Turkey	84.7
5		Denmark	82.4
6		Norway	77.3
7		Netherlands	76.1
8		Germany	72.4
9		Spain	72.1
10	Q2	Israel	68.6
11		Italy	68.2
12		Austria	67.5
13		Luxembourg	67.4
14		Canada	66.6
15		Finland	63.3
15		Korea	63.2
17		United States	61.7
18		Hungary	60.9
19	Q3	United Kingdom	59.2
20		Japan	58.1
21		Iceland	57.8
22		Slovak Republic	57.3
23		Mexico	46.9
24		France	46.4
25		New Zealand	46.3
25		Czech Republic	46.3
27		Chile	44.3
28	Q4	Slovenia	41.2
29		Greece	39.5
30		Poland	38.9
31		Switzerland	31.1
32		Estonia	30.6
33		Ireland	26.9
34		Latvia	16.4
35		Lithuania	5.9
36		Portugal	3.7

Figure 14:
Patriotism

No		Country	SFI
1	Q1	Luxembourg	73.0
2		Poland	72.4
3		Canada	72.0
4		Slovak Republic	64.1
5		Ireland	62.7
6		Slovenia	62.0
7		Hungary	61.5
8		Chile	58.8
9		Belgium	57.5
10	Q2	Austria	57.4
11		Lithuania	57.3
12		Estonia	56.8
13		Greece	55.5
14		Germany	54.9
15		Switzerland	54.5
15		Portugal	52.2
17		Sweden	50.6
18		Latvia	50.5
19	Q3	Netherlands	49.8
20		Italy	47.7
21		Denmark	47.5
22		Spain	46.9
23		Finland	43.2
24		Australia	42.8
25		United Kingdom	41.9
26		France	41.7
27		Czech Republic	41.5
28	Q4	Israel	41.0
29		Norway	39.5
30		United States	34.3
31		Mexico	33.3
32		New Zealand	33.1
33		Iceland	32.0
34		Turkey	28.5
35		Korea	28.0
36		Japan	22.1

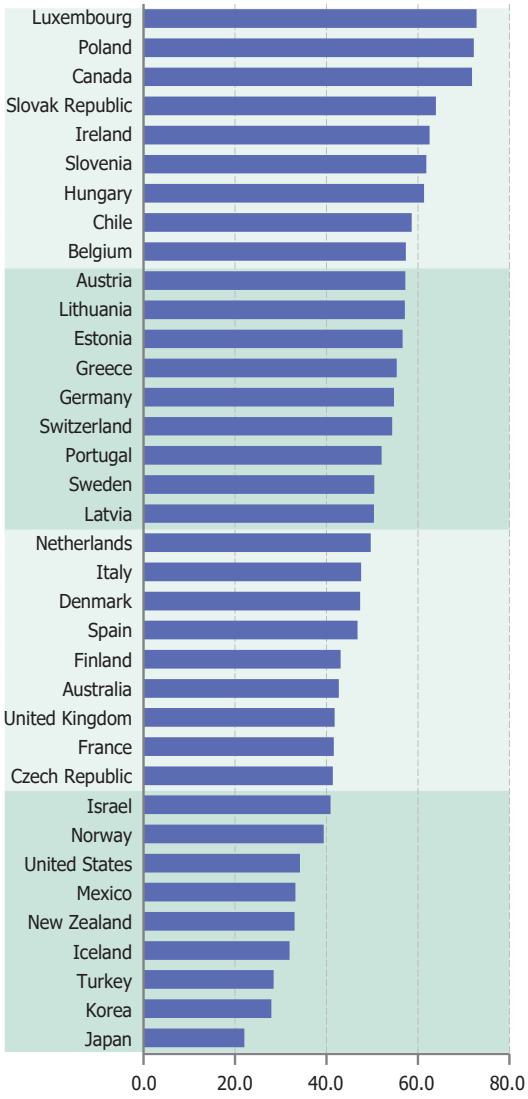

Figure 15:
Family

No		Country	SFI
1	Q1	Turkey	98.8
2		Greece	94.5
3		Poland	92.9
4		Slovak Republic	89.3
5		Italy	85.5
6		Mexico	83.9
7		Lithuania	82.9
8		Slovenia	74.4
9		Austria	67.4
10	Q2	Israel	65.9
11		Ireland	64.5
12		Portugal	60.3
13		Canada	59.5
14		Denmark	58.1
15		Chile	57.3
15		Belgium	56.9
17		Luxembourg	56.5
18		United States	56.0
19	Q3	Spain	55.5
20		Hungary	53.9
21		Latvia	51.6
22		Germany	47.1
23		Switzerland	46.3
24		Czech Republic	44.2
25		Finland	43.4
26		Netherlands	42.7
27		United Kingdom	33.4
28	Q4	Iceland	33.0
29		Estonia	32.1
30		Norway	31.6
31		New Zealand	29.8
32		France	27.7
33		Australia	22.2
34		Sweden	18.6
35		Korea	12.2
36		Japan	0.0

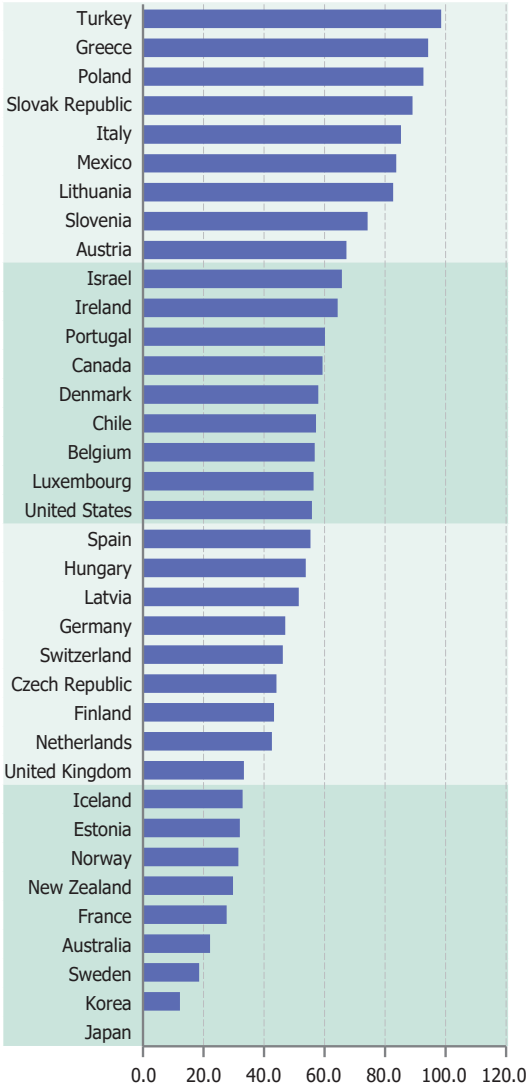

Figure 16:
Spirituality

No		Country	SFI
1	Q1	Japan	86.9
2		Switzerland	79.4
3		Germany	77.6
4		Korea	75.3
5		Norway	73.7
6		Israel	73.6
7		Iceland	73.4
8		New Zealand	67.0
9		Canada	66.7
10	Q2	United Kingdom	65.8
11		Denmark	65.2
12		Australia	65.1
13		Czech Republic	63.7
14		Austria	63.2
15		Netherlands	63.1
16		Ireland	61.6
16		Luxembourg	61.6
18		Sweden	58.5
19	Q3	Slovenia	57.9
20		United States	55.1
21		Estonia	54.9
22		Finland	53.9
23		Belgium	52.6
24		Poland	48.3
25		Lithuania	41.3
26		Hungary	41.1
27		France	40.5
28	Q4	Slovak Republic	39.5
29		Portugal	36.0
30		Latvia	34.6
31		Chile	33.4
32		Mexico	29.2
33		Spain	28.1
34		Italy	26.9
35		Greece	17.5
36		Turkey	17.3

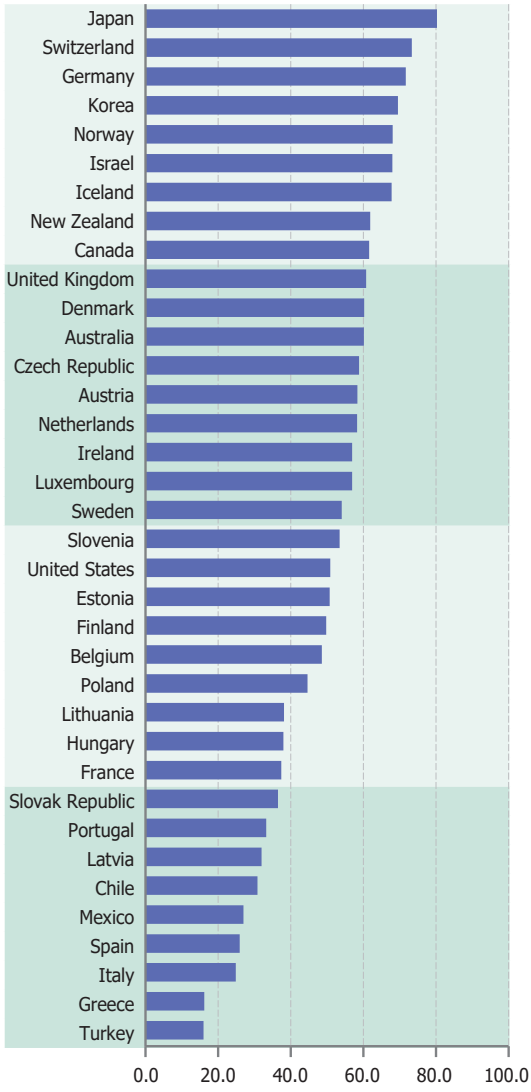

Figure 17:
Self-reliance

No		Country	SFI
1	Q1	Iceland	73.0
2		Switzerland	68.9
3		Denmark	64.8
4		Finland	64.7
5		United Kingdom	62.3
6		Czech Republic	59.8
7		Austria	58.8
8		France	57.8
9		Germany	57.2
10	Q2	Ireland	56.6
11		Belgium	56.4
12		United States	55.7
13		Australia	55.5
14		Norway	55.2
15		Netherlands	55.0
15		Slovenia	54.1
17		New Zealand	53.7
18		Slovak Republic	53.4
19	Q3	Poland	53.0
20		Canada	52.5
21		Luxembourg	51.4
22		Sweden	51.0
23		Portugal	50.8
24		Italy	48.5
25		Hungary	48.4
26		Lithuania	46.5
27		Greece	44.5
28	Q4	Spain	40.6
29		Latvia	38.5
30		Chile	36.2
31		Japan	35.8
32		Mexico	35.4
33		Estonia	34.5
34		Turkey	33.3
35		Israel	32.6
36		Korea	25.5

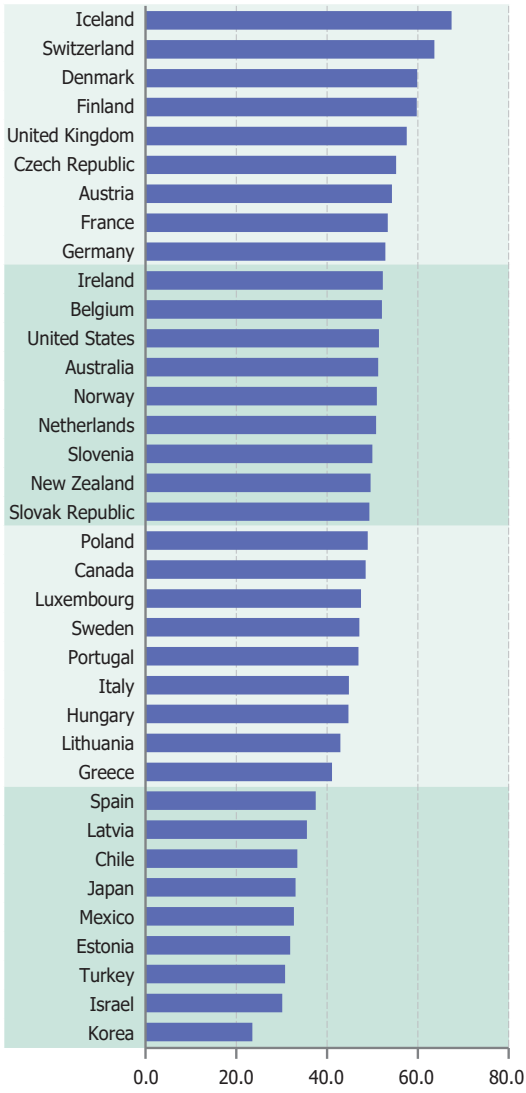

Figure 18:
Material advancement

No		Country	SFI
1	Q1	Hungary	66.1
2		Slovak Republic	64.9
3		Portugal	64.8
4		Lithuania	64.1
5		Latvia	62.4
6		Norway	62.2
7		Slovenia	58.6
8		Poland	57.0
9		Czech Republic	56.9
10	Q2	Netherlands	56.8
11		Denmark	56.2
12		Canada	56.1
13		New Zealand	55.4
14		Austria	54.8
15		Israel	54.7
15		Estonia	54.5
17		Turkey	53.8
18		Germany	53.3
19	Q3	France	52.7
20		Belgium	52.2
21		Ireland	51.8
22		Korea	50.8
23		Finland	50.2
24		Chile	48.2
25		Spain	47.7
26		Japan	47.6
27		Luxembourg	46.9
28	Q4	Australia	46.3
29		Switzerland	46.2
30		Greece	45.6
31		Sweden	45.1
32		Mexico	44.9
33		United Kingdom	40.9
34		Iceland	40.6
35		Italy	39.6
36		United States	28.7

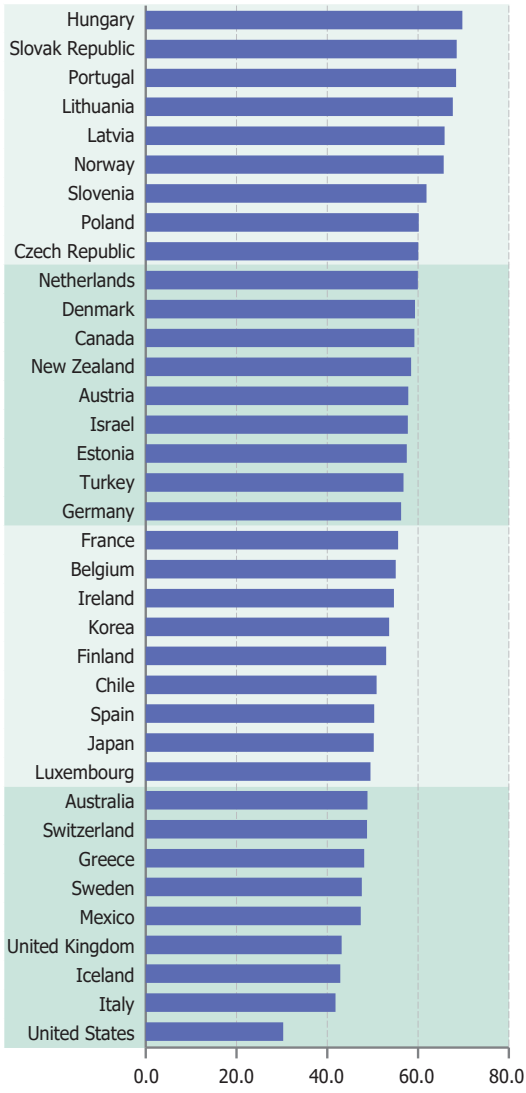

Figure 19:
Wellbeing & Generativity