EUROPEAN INNOVATION SCOREBOARD

Exploratory Report

How to measure social innovation

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This report was prepared by:

Francisco Rocha, Hugo Magalhães, Douglas Thompson (SPI)

Maruca De Ramón, Joanie Paquette, Martina Barbero (Deloitte)

as part of the ***European Innovation Scoreboards (EIS) project***

for the European Commission, Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs

Coordinated and guided by:

Marshall Hsia, European Commission, Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs

Athina Karvounaraki, European Commission, Directorate-General for Research and Innovation

Tiago Pereira, European Commission, Directorate-General for Research and Innovation

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Executive Summary

This report is developed as part of the European Innovation Scoreboards (EIS) project for the European Commission (EC), Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs.

The objectives of the report are twofold: (i) To develop a set of potential indicators to measure social innovation; and (ii) To provide proposals for future work on which indicators could be included in a future EIS edition.

Within this context, the report explores possible definitions of social innovation. The literature identifies that finding a common definition of social innovation is a challenging task, as the concept is related to a range of disciplines and undertakings. An important contribution is the Oslo Manual (2018) definition of social innovation:

> *"Innovations defined by their (social) objectives to improve the welfare of individuals or communities."*

In order to achieve the objectives presented above, a methodology based on six main steps was established. This consisted of a literature review of publications (step 1), the definition and analysis of fields of action and dimensions of social innovation (step 2), the development of selection criteria to identify the main indicators per dimension (step 3), the development of interviews and an expert workshop with social innovation experts (step 4), the identification of possible indicators to include in the EIS (step 5), and the test of possible indicators to include in the EIS (step 6).

The following process was implemented:

- The study team assessed a range of projects / articles / indexes / surveys under the topic of social innovation. In total, 218 indicators were identified among these publications. The summary information for each indicator included the title of the publication, dimension of the indicator, source, number of countries covered, periodicity, fields of action and definition;
- A set of eight fields of action (employment, migration, demographic change, gender, education, poverty, health and environment) and six dimensions (civil society, entrepreneurship, financing, infrastructure, knowledge and skills, and political and institutional framework) were identified and selected, taking into account the literature review and interactions with social innovation experts. The fields of action categorize social innovation activities and the dimensions describe which framework conditions allow social innovation to develop. The links between dimensions, social innovation indicators and fields of action allowed the study team to better understand which fields of action are most related to the six specific dimensions selected. It was found that each indicator can be associated with one or more fields of action;
- An initial set of criteria was developed to provide an initial identification of indicators per dimension to measure social innovation. In total, 40 indicators were thus selected among the six defined dimensions. The selection criteria included aspects such as periodicity of the results, type of data, geographical coverage and inclusion of the indicator in several projects / articles / indexes / surveys;
- In order to have a more detailed perception of social innovation, the study team conducted a series of interviews and an expert workshop with a selection of social innovation experts. The interviews were conducted between 29th June and 14th July 2020. In total, 10 interviews were implemented. The expert workshop took place on 28th October 2020 with a total of 15 participants.

Through the analysis developed under these steps, the study team extended the set of criteria to help identify a limited number of indicators to be included in a futures EIS edition. These extended criteria included aspects such as: regularity and reliability of sources; data being up-to-date (published in 2018 or 2019); coverage of at least EU-27; not being representation of perceptions or opinions; and relevance to social innovation.

Using these criteria, a total of six possible indicators were selected:

Indicator	Source	Years	Number of countries with data available
People at risk of poverty or social exclusion	Eurostat	2012-2019	35/37
Culture of volunteerism	Charities Aid Foundation	2012-2017	37/37
Presence of socially focused business support	F6S and Crunchbase	2019	26/37
Total public expenditure on social benefits	Eurostat	2011-2018	35/37
Research on SI (publications & patents)	EU OpenAIRE	2012-2019	36/37
Businesses that aim to solve social problems	Global Entrepreneurship Monitor	2019	27/37

Based on the analysis developed and the results gathered, the study team was able to provide conclusions on the measurement process of social innovation, as well as define a set of proposals for future work for the potential inclusion of social innovation indicators in the EIS.

Within this context, two proposals are provided:

Proposal A. Inclusion of social innovation indicators in the EIS as contextual indicators

Social innovation is very different from other forms of innovation measured in the EIS. Thus, adding social innovation indicators to the EIS index is not considered to be fully able to reflect the different dimensions of the social aspects. Within this context, the study suggests that a selection of the six possible social innovation indicators identified for testing, are included in the EIS as additional contextual indicators on the impact of structural differences between countries. This would allow a better understanding of the differences between countries in the performance of indicators concerning social innovation.

Proposal B. Development of a separate measurement scoreboard for social innovation

As noted, it is not advisable for current indicators that measure social innovation to be included as part of the current EIS measurement framework. Comparing social innovation between different countries can lead to different assessments as the concept of social innovation is very broad and can differ from the EIS focus. Instead, a separate measurement tool for social innovation beyond the EIS could be adopted along the lines of a social innovation scoreboard. This tool could include an inventory of different indicators, evaluated on an annual basis, only targeting social innovation. The social innovation experts contacted through this study were in favour of this option. In terms of the indicators to include within this tool, the study team could use broader selection criteria in comparison to the one used for defining the possible indicators to include in the EIS. The study offers good level of detail on how to measure social innovation, with coherent and useful information with respect to different aspects of the concept. Further research would be required to develop a roadmap for the implementation of such a proposed new measurement tool for social innovation. This roadmap could be similar to the methodology developed in the present study, with potential testing of the indicators and building the new measurement tool.

1 Introduction

1.1 Background and context

The concept of social innovation still lacks consensus regarding its relevance or specific meaning in the social sciences and humanities. Several publications (e.g. "The Young Foundation (2012), Social Innovation Overview – deliverable of the project "The theoretical, empirical and policy foundations for building social innovation in Europe" (TEPSIE), EC, DG Research"; OECD (2011), "Fostering Innovation to Address Social Challenges"; and Hakan Michi (2019), "Is measuring social innovation a mission impossible?") refer that there is no common definition for social innovation. The difficulty in defining social innovation is related to the fact that the concept is very broad. Thus, it is challenging to find a definition that can cover different fields, sectors and regions. An important contribution is the Oslo Manual (2018) definition of social innovation:

> *"Innovations defined by their (social) objectives to improve the welfare of individuals or communities."*

Moreover, it is relevant to define business innovation and distinguish it from social innovation. The term "innovation" can be related to both an activity and the outcome of an activity. The Oslo Manual defines business innovation as "a new or improved product or business process (or combination thereof) that differs significantly from the firm's previous products or business processes and that has been introduced on the market or brought into use by the firm". Furthermore, business objectives can be misleading, as aspects such as entrepreneurial activity might not necessarily be related to social innovation, as entrepreneurship targets, for example, economic objectives rather than social purposes.

However, all innovations are social processes of interaction and communication, and all innovation outputs have social outcomes and impacts. Thus, the "social" in social innovation can only mean the directedness at and the prioritisation of social needs, problems and values in innovation and intensified awareness of the societal context of innovation. In addition, social innovation is a broad concept, which can be roughly divided into three definitions:

- ***A societal approach:*** Social innovations are innovations that are both social in their ends and means. News ideas (products, services and models) which serve the needs in society but also create new collaborations for the good of society (Sabato, et al., 2017, p. 3);
- ***An economic approach:*** The main objective of social innovation is to provide goods and services for the market in an entrepreneurial and innovative fashion, but profits derived from it are used to achieve social objectives (Biggeri, et al, 2017, p. 300);
- **An individual approach:** Social innovation becomes a vehicle to empower those in a disadvantaged position by creating for instance entrepreneurship initiatives, alleviating vulnerable groups out of poverty (Smith, et al., 2019, pp. 108-109).

Furthermore, measuring social innovation still lacks valid indicators. Several research projects / articles / indexes / surveys have been conducted to address this issue, aiming to provide a feasible measurement model for social innovation, exploring different available indicators. The background work developed in different research projects / articles / indexes / surveys suggests that there is no commonly accepted method for measuring social innovation.

Social innovation involves a variety of actors from different spheres, sectors and contexts, including stakeholders such as welfare organisations, associations, NGOs – different stakeholders might have different methods and measures of social innovation. Thus, it is important to focus the analysis of social innovation in all these actors and sectors, having a broader approach. It is also relevant to note that social innovation relies on symbolic knowledge as opposed to technical-analytical knowledge. Within this context, this report will focus on assessing what should be measured within social innovation through the selection of a set of indicators identified through the literature review and interviews developed.

1.2 Main objectives

This exploratory report investigates a set of indicators related to social innovation by selecting relevant projects / articles / indexes / surveys that attempt to quantitatively measure social innovation.

The document aims to assess a list of indicators that will be measured, taking into consideration the concepts of fields of action and dimensions of social innovation. It is relevant to link the identified

indicators with the selected fields of actions and dimensions to better understand where social innovation is occurring. Furthermore, the document provides an analysis regarding the selection of a set of indicators for possible inclusion in the European Innovation Scoreboard (EIS). Through this analysis, a testing of the possible indicators to include in the EIS is developed.

According to the main conclusions developed through the analysis, the study team provides a set of proposals for future work to reflect on the potential inclusion of social innovation indicators into the EIS.

The document serves as an initial step to understand which indicators are able to measure social innovation and provides a list of indicators for possible inclusion in the EIS.

1.3 Methodology

The methodology applied under this study is first based on literature review and an analysis of specific projects / articles / indexes / surveys, aiming to identify communalities between indicators and measurement models according to the existing accumulated knowledge. Within this context, the following steps were developed:

- Step 1: Literature review, identifying a series of publications that have been considered as relevant, as well as direct links between these materials. The literature review includes a set of relevant projects / articles / indexes / surveys under the topic of social innovation. The literature review was organized by publication year and type of material (academic papers, reports, policy briefs, among others);
- Step 2: Defining and analysing the fields of action and dimensions of social innovation through the literature review conducted under the study. Through this analysis, the project team identified, for each indicator, one or more fields of action and one specific dimension. This process allowed to understand the links between fields of action, dimensions and indicators;
- Step 3: Developing a selection criterion to identify 5 to 10 main indicators per dimension. The criteria included aspects such as periodicity of the results, type of data, geographical coverage, inclusion of the indicator in several sources and measurable characteristics;
- Step 4: Conducting interviews and developing an expert workshop with experts in the topic of social innovation. These interviews took place between the 29th of June and the 14th of July 2020, while the expert workshop occurred on 28th October 2020. A total of 10 experts were interviewed and six attended the expert workshop. The interviews and workshop allowed to better understand the concepts of fields of action and dimensions, as well as the experts' perspective on how to measure social innovation. Furthermore, the experts provided important inputs to define potential indicators to include in the EIS;
- Step 5: Identifying possible indicators to include in the EIS. This selection was based on the list of indicators defined in Step 3 and according to a selection criterion;
- Step 6: Testing of 6 possible indicators to include in the EIS.

Each step consisted of a series of subtasks designed to achieve results that would support the study's objectives, as shown in the below figure.

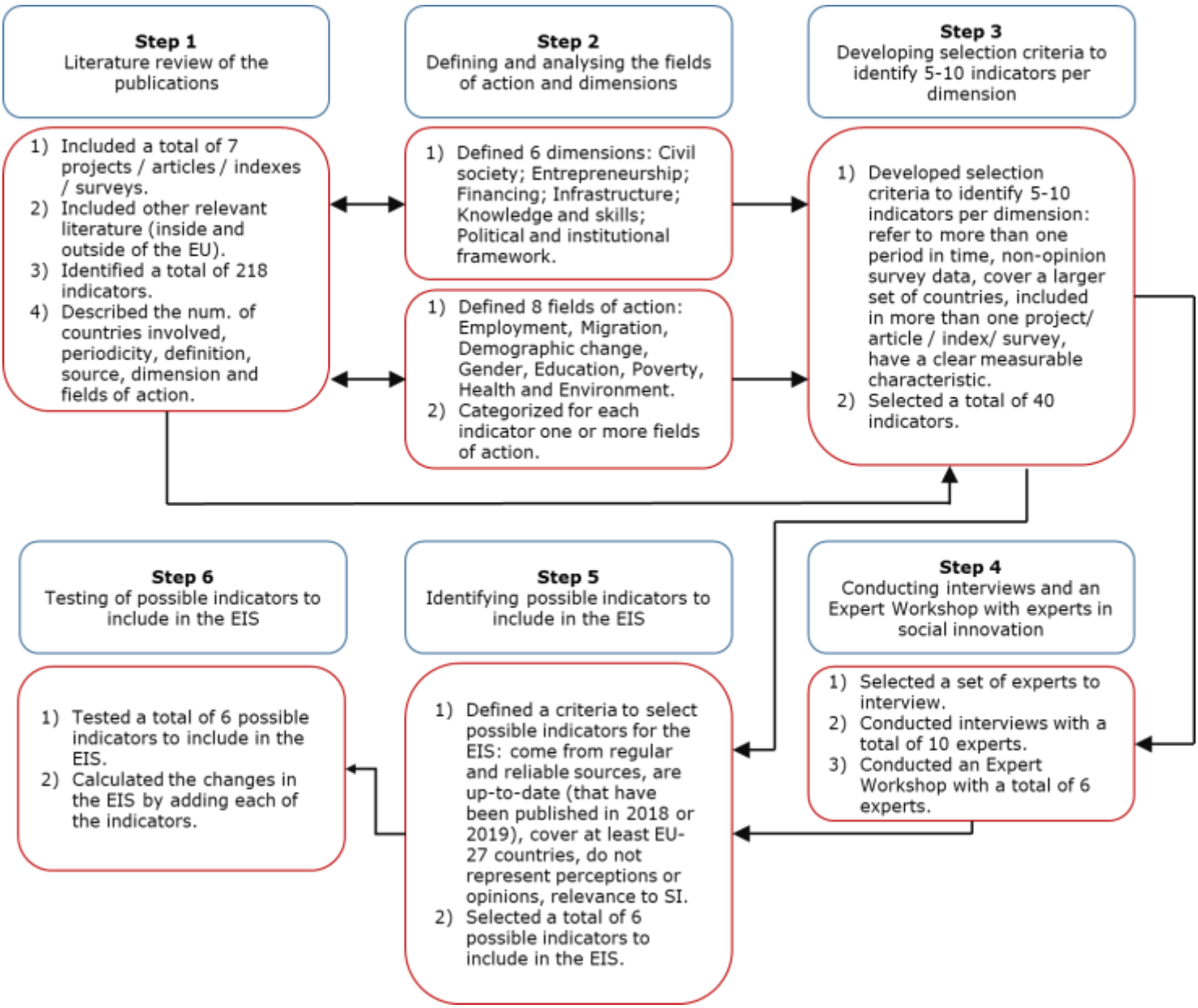


Figure 1. Methodology of the study.

Within this context, the following projects / articles / indexes / surveys have been selected taking into account inputs received by the EC and relevant literature developed under the social innovation thematic:

- European Digital Social Innovation Index (Nesta);
- Social Innovation Index (Economist Intelligence Unit (EIU));
- Regional Social Innovation Index – RESINDEX (Basque Innovation Agency);
- Improved Measurement of the Economics of Social Innovation (René Wintjes, Nordine Es-Sadki, Rüdiger Glott and Ad Notten);
- European Social Survey (European Social Survey European Research Infrastructure (ESS ERIC));
- Blueprint of social innovation metrics: contributions to an understanding of opportunities and challenges of social innovation measurement (Björn Schmitz, Gorgi Krlev, Georg Mildenberger, Eva Bund and David Hubrich);
- European Microfinance survey (European Microfinance network).

The general features of each project / article / index / survey are provided in Table 1.

Table 1. Summary information for the attempts to measure social innovation.

Title of the project/ article / index/ survey	Authors	Brief description	Dimension	Number of indicators	Number of countries covered	Periodicity	Latest edition	Website
The European Digital Social Innovation Index (EDSII)	Nesta	The index was calculated in 2019 to measure how different European cities support digital social innovation (DSI) and tech for good to grow and thrive.	The indicator system consists of six dimensions: Funding; Skills; Civil Society; Collaboration; Infrastructure; and Diversity and Inclusion.	32	26 EU countries[1]	NA	2019	https://www.nesta.org.uk/feature/european-digital-social-innovation-index/
Social Innovation Index	Economist Intelligence Unit (EIU)	The Social Innovation Index 2016 assesses the policy and business environment that enables social innovation. The Index covers 45 countries in the developed and developing world.	The Index scores countries across four categories: Policy and Institutional Framework; Financing; Entrepreneurship; and Society.	17	45 countries worldwide	NA	2016	https://www.urenio.org/2016/11/23/social-innovation-index-2016/
Regional Social Innovation Index (RESINDEX)	Basque Innovation Agency	The index conceptually links the notion of the absorptive capacity of knowledge with Social Innovation.	The indicator includes: Potential Capacity for Innovation Index; Social Orientation Index; and Social Innovation Index.	17	1 (Basque Country - Spain)	2013	2013	http://www.simpact-project.eu/index.htm
Improved Measurement of the Economics of Social Innovation	René Wintjes, Nordine Es-Sadki, Rüdiger Glott and Ad Notten	Set of macro-level suggested indicators as presented in TEPSIE. The indicators include the description of SI potential (supply) and SI needs (demand) for both tangible and intangible indicators.	The indicator system consists of six dimensions: Labour; Financial Capital; Public Capital; Knowledge Capital; Social Capital; and Health.	47	193 (varies between indicators)	1970-2019 (varies between indicators)	2016	http://www.simpact-project.eu/publications/reports/SIMPACT_D51.pdf

[1] Note: The index includes 60 cities in total (26 of the capital cities in the EU28 and an additional 34 non-capital cities chosen based on population size).

Title of the project/ article / index/ survey	Authors	Brief description	Dimension	Number of indicators	Number of countries covered	Periodicity	Latest edition	Website
European Social Survey	European Social Survey European Research Infrastructure (ESS ERIC)	The European Social Survey (ESS) is an academically-driven multi-country survey, which has been administered in over 35 countries to date. Its three aims are, firstly – to monitor and interpret changing public attitudes and values within Europe and to investigate how they interact with Europe's changing institutions, secondly – to advance and consolidate improved methods of cross-national survey measurement in Europe and beyond, and thirdly – to develop a series of European social indicators, including attitudinal indicators.	The ESS consists of six different dimensions: Media and Social Trust; Politics; Subjective Well-being, Social Exclusion, Religion, National and Ethnic Identity; Gender, Year of Birth and Household Grid; Socio-Demographic; and Human Values. And 14 rotating themes[2] that were assessed once or twice since 2002.	18	30 in 2018[3]	Every 2 years since 2002	2018	https://www.europeansocialsurvey.org/about/
Blueprint of social innovation metrics: contributions to an understanding of opportunities and challenges of social innovation measurement	Björn Schmitz, Gorgi Krlev, Georg Mildenberger, Eva Bund and David Hubrich	Identified particular categories for the variables to inform the screening of available individual indicators, what is needed for their adoption as well as gaps in the data with regard to social innovation.	The indicator system consists of three levels: (I) entrepreneurial activities; (II) field-specific organisational output and societal outcome; and (III) framework conditions. These levels have been divided into sub-indicators.	69	6	2000, 2004, 2009, 2013	2013	https://www.siceurope.eu/sites/default/files/field/attachment/TEPSIE%20Policy%20Paper%20Measurement%20Blueprint%20%28WP2%29.pdf

[2] See: https://www.europeansocialsurvey.org/data/module-index.html
[3] See: https://www.europeansocialsurvey.org/about/participating_countries.html

Title of the project/ article / index/ survey	Authors	Brief description	Dimension	Number of indicators	Number of countries covered	Periodicity	Latest edition	Website
European Microfinance survey	European Microfinance network	It aims to track the developments in the microfinance sector in Europe and to shed light on MFIs' characteristics, and their social and financial performances. It provides reliable and comparable data and insights for the European Microfinance Sector.	The survey reports on four types of findings: 1) key institutional characteristics; 2) range of products and services; 3) social performance and outreach; and 4) portfolio quality, financial performance indicators and funding.	18	27 (Europe + Turkey)	Every 2 years since 2004	2016-2017	https://www.european-microfinance.org/sites/default/files/document/file/Microfinance%20in%20Europe%20Survey%20Report%202016-2017_final.pdf

There is a large number of individual indicators included in these projects / articles / indexes / surveys. These individual indicators are presented in the Annex 2 (Table 18 to Table 24). These detailed tables are included in the Annex 2 due to their size and number of indicators.

In addition to these projects / articles / indexes / surveys, a series of other relevant literature (inside and outside of the EU) has also been identified (included in the References and bibliography chapter). This other literature has more of a qualitative focus.

Furthermore, and as previously described, the project team conducted a set of interviews, and a workshop with a selected group of social innovation experts. These social innovation experts were selected according to the literature review developed by selecting a set of authors from the projects / articles / indexes / surveys analysed. The complete list of interviews developed can be found in Table 2.

Table 2. List of experts in social innovation interviewed under this study.

Name	Role	Interview Date
Philippe Martin	DG RTD contact in charge of digital innovation	30 June 2020
João Rafael Brites	Regenerative Economist | Specializing in Social Innovation, Shared-Value & Sustainable Finance	13 July 2020
Judith Terstriep / Georg Mildenberger	Head of Research Department, Institute for Work and Technology	1 July 2020
Christoph Kaletka	The Centre for Social Research (TUDO)	6 July 2020
Jonathan Bone	Senior Researcher at Nesta	13 July 2020
Alfonso Unceta / Natalia Restrepo	Director of Sinnergiak Social Innovation	13 July 2020
Rory Fitzgerald	Director of the ESS ERIC	6 July 2020
Paolo Landoni	Research Assistant, Universiteit Amsterdam / Associate Professor, Politecnico di Torino / Policy and Research Officer at the EMN	9 July 2020
Attila Havas	Senior research fellow at the Institute of Economics, CERS	13 July 2020
Teresa Franqueira	Group Coordinator for ID+ Desis Lab and member of DESIS Network – Design for Social Innovation and Sustainability	29 June 2020

Regarding the project workshop (Table 3), it took place on 28th October 2020, with the objective of discussing the preliminary findings of the study (provided to the experts one week before the workshop) and the measurement of social innovation.

Table 3. List of experts that participated in the workshop.

Name	Role
Attila Havas	Senior research fellow at the Institute of Economics, CERS
Christoph Kaletka	The Centre for Social Research (TUDO)
Judith Terstriep	Head of Research Department, Institute for Work and Technology
Karsten Frøhlich Hougaard	Director at Teknologisk Institut Denmark
Luis Rubalcaba	Professor of Economic Policy, Department of Economics and Business Administration, University of Alcalá
Simone Strambach	Professor, Philipps University of Marburg

The methodology applied under this study allowed the project team to determine a potential list of indicators to include in the EIS and have an initial understanding on how social innovation can be measured, which supported the provision of suggestions for future work. This report takes into consideration the meeting held on 14th January 2021 under the European Research Area and Innovation Committee (ERAC). The meeting focused on the European Innovation Scoreboard, towards a revision of the measurement framework. It was noted during the meeting that aspects such as the relevance to social innovation of the indicator "people at risk of poverty" should be highlighted, as well as dimensions such as the participation in the labour market and gender. These aspects have been considered in this report.

1.4 Document structure

The six steps presented in the previous section are reflected in the following chapters of the document:

- Chapter 2 – Defining the fields of action: this chapter provides the concept of fields of action according to the research developed under the SIMPACT Project. The main aim is to connect the fields of action with the specific indicators that are selected for each project / article / index / survey provided in the Annex 2;
- Chapter 3 – Defining the social innovation dimensions and indicators: this chapter provides a selection of the indicators identified in the projects / articles / indexes / surveys related to social innovation within a set of six dimensions. These dimensions are categorized based on the dimensions for each indicator defined in the literature review;
- Chapter 4 – Linking dimensions, fields of action and indicators: this chapter establishes a connection between the selected indicators and the dimensions from chapter 3 and the fields of action defined under chapter 2;
- Chapter 5 – Selecting possible indicators to include in the European Innovation Scoreboard: this chapter presents the initial selection of a more limited number of indicators which could be considered for the European Innovation Scoreboard in 2021;
- Chapter 6 – Testing of possible indicators to include in the European Innovation Scoreboard: this chapter presents the results of the testing considering six indicators identified previously;
- Chapter 7 – Conclusions and proposals for future work: this chapter includes the main conclusions of the study and proposals for future work, taking into consideration each step presented within the methodology;
- Chapter 8 – References and bibliography: this chapter presents the list of documents and materials consulted during the development of this report.

2 Defining the fields of action

The literature review allowed the project team to collect information on specific fields where social innovation occurs. Within this context, a total of eight fields of action were selected that categorize social innovation activities. This exercise allows the association of each selected indicator to one or more fields of action. In order to select each field of action, the project team took into account the selection criteria, research developed under the SIMPACT project and input provided by the interview experts.

The SIMPACT project defines three main societal challenges faced by Europe (Employment, Migration and Demographic change) and three main transversal themes (Gender, Education and Poverty) that are able to categorize social innovation activities. These main societal challenges and transversal themes constitute the fields of actions analysed. This selection was developed based on the main societal challenges Europe is facing according to the different social innovation cases collected under the project (94 in total). Taking this into account, a set of six fields of action were selected:

- **Employment** – associated with empowerment, labour market participation and capabilities;
- **Migration** – associated with inclusion and literacy;
- **Demographic change** – including elderly people and young generations;
- **Gender**;
- **Education**;
- **Poverty** – including marginalization.

In addition to the selected fields of action under the SIMPACT project, several interviewees identified that aspects such as **Health** and **Environment** should be considered as relevant areas in which social innovation occurs. Regarding the health-related aspects, this is to some extent included in the demographic change field of action, as it includes health care aspects of the population. However, and according to the inputs received from the interviewees, the health category should be considered as an independent field of action due to its relevance to different sectors and activities related to social innovation. Furthermore, the current Covid-19 pandemic raises new health challenges in the context of social innovation in Europe and at the international level.

Within this context, the selected indicators will allow measuring the progress in each one of these fields of action. It is relevant to note that some indicators cannot be categorized according to the selected fields of action (these have been classified as "Other") and that each indicator can be associated to more than one field of action.

As further detailed in the Annex 2, some of the full list of indicators (around 32% of the indicators) are classified as "Other". A large number of indicators that are categorized as "Other" are associated with political (e.g. Government effectiveness, Transparency, and Legislation) and digitalisation (e.g. access to internet, technological development) aspects of social innovation.

It is also relevant to note that many indicators (as detailed in the Annex 2 tables) are related to Employment, Education, and Environment fields of action. Within this context, Figure 2 below shows the percentage of indicator citations per field of action, without considering the category "Other". As shown in the Figure, Employment is the field of action associated with the highest number of listed indicators. In addition, Migration is the field of action associated with the least number of indicators.

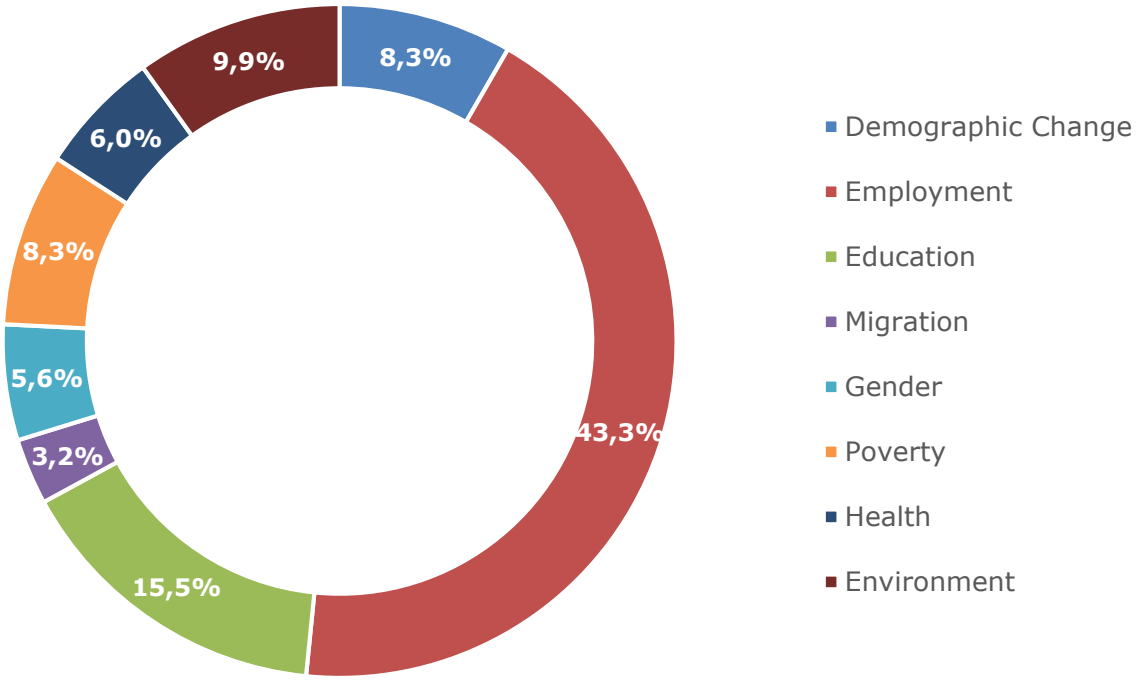


Figure 2. Fields of action per indicator (% of citations, multiple answers possible).

Figure 3 shows the results of a similar analysis done in the SIMPACT project. As can be seen in the figure, Employment was also the field of action associated with the highest number of listed indicators.

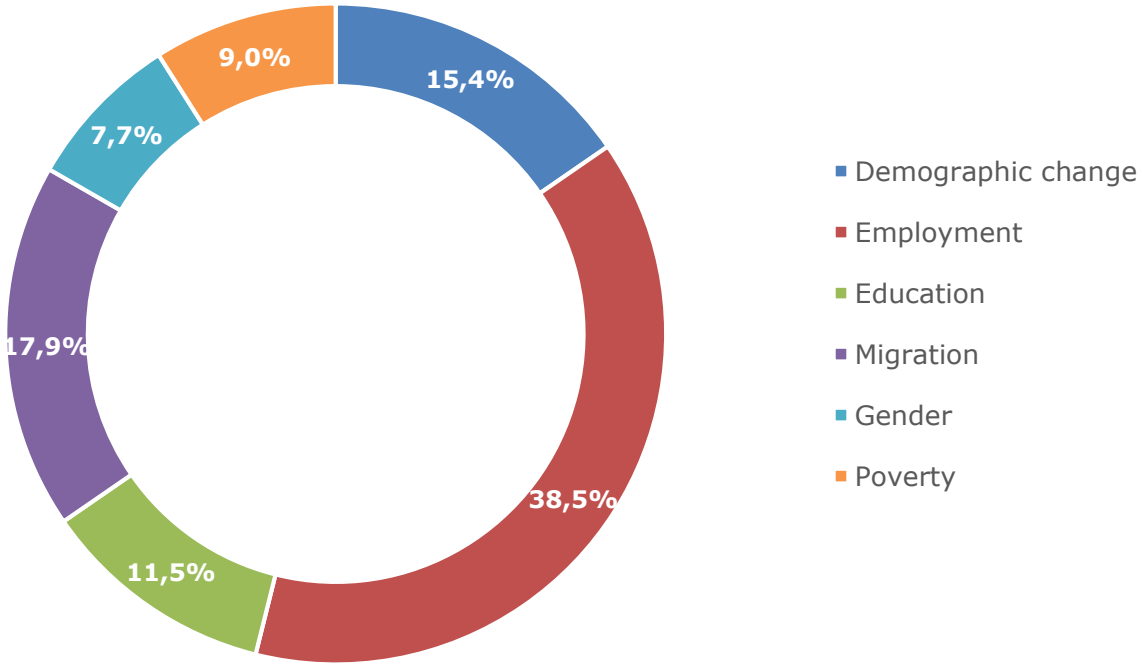


Figure 3. Fields of action per indicator in the SIMPACT project (% of citations, multiple answers possible).

Source: Judith Terstriep, Maria Kleverbeck, Alessandro Deserti and Francesca Rizzo (2015), "Comparative Report on Social Innovation across Europe", SIMPACT project D3.2

3 Defining the social innovation dimensions and indicators

In addition to defining a set of fields of action that allow measuring social innovation, it is also relevant to describe which framework conditions allow social innovation to develop. Thus, a set of dimensions related with each indicator has been defined taking into consideration the information collected from the literature review on the attempts to measure social innovation (see Table 18 to Table 24 in the Annex 2 for the details of each indicator used):

- Civil society;
- Entrepreneurship;
- Financing;
- Infrastructure;
- Knowledge and skills;
- Political and institutional framework.

This selection was developed by considering the main topics targeted within the different projects / articles / indexes / surveys analysed. The experts interviewed under the project agreed with the proposed dimensions (additional details available in Annex 1). The indicators allow to assess the capacity to enable social innovation within each dimension. Within this context, further information on the rationale for the selection of the six dimensions and corresponding indicators is presented. In addition, a set of 5 to 10 main indicators per dimension was identified (total of 40 indicators), according to the following criteria:

- Indicators that refer to more than one period in time (e.g. results from several years and/or different time periods);
- Indicators that are non-opinion survey data[4]. Priority is given to indicators that are based on external statistical sources such as the Eurostat;
- Indicators that cover a larger set of countries at the world level (European coverage should be ensured);
- Indicators that are included (or partially included) in more than one project/ article / index/ survey according to the summary analysis;
- Indicators that have a clear measurable characteristic;
- Indicators that are directly related with the main aspects highlighted by the interviewees (Question 5 of the questionnaire) and experts that have participated in the workshop.

The data included in each indicator per dimension varies, including opinion and survey data, from different periods and sources, as well as the extent of country coverage. It is also relevant to note that besides the indicators selected through the different projects/ articles / indexes/ surveys, the project team also took into account other relevant literature sources referred by experts, including the SME Performance Review of the European Commission, and the Global Entrepreneurship Monitor study. The indicators that have been initially selected according to the six dimensions and the eight fields of action are described below. It is important to highlight that each indicator has a different level of relevance to social innovation. Some indicators selected through the criteria do not measure social innovation sufficiently, rather only the aspect of innovation. However, these indicators were selected according to the above-mentioned criteria and are considered of relevance to the analysis.

The tables are split by the dimensions, with the field of action for each indicator also identified (in the "Fields of Action" column).

3.1 Civil society

The literature highlights that civil society plays a key role in encouraging the development of social innovation and citizen engagement. Actions such as social cooperation, volunteer work, community

[4] OECD, OECD Glossary of Statistical Terms, 2008: "Sample survey, which aims to ascertain or elucidate opinions possessed by the members of a given human population with regard to certain topics"

engagement and trust are of high importance for developing social innovation, promoting social engagement and addressing social problems.

Within this context, social cohesion is selected as one of the indicators addressed under this dimension, measuring the support provided at the community level, citizen attachment to the community, civic engagement and trust. Furthermore, this dimension includes indicators focused on the culture of volunteerism, positive attitudes towards civil society, promoting active engagement of the community in social innovation initiatives, immigration and people at risk of poverty or social exclusion (see Table 4). These indicators are part of the literature from The European Digital Social Innovation Index (EDSII), the Social Innovation Index (EIU) and the Improved Measurement of the Economics of Social Innovation (SIMPACT Project).

Table 4. Summary of the indicators related to social innovation under the civil society dimension.

Indicator	Source	Number of countries covered	Periodicity	Fields of Action	Definition	Title of the project/ article / index/ survey
Social cohesion	OECD Regional Wellbeing Index	26 (EU-27 and the UK)	Annual 2000-2017	Other	Quality of support network measured by percentage answering "Yes" to survey question asking "if you were in trouble, do you have relatives or friends you can count on to help you whenever you need them or not?"	The European Digital Social Innovation Index (EDSII)
	Eurobarometer 81.5	20 (EU-27 and the UK)	Twice per year 1974-2019	Other	Trust in people measured by average score given by respondents who were asked to score on a scale of 1-10 how much people can be trusted or not (where '1' means that "most people cannot be trusted" and '10' means that "most people can be trusted)	The European Digital Social Innovation Index (EDSII)
Positive attitudes to civil society	Flash Eurobarometer 373	25 (EU-27 and the UK)	Ad hoc, 2013	Other	Percentage of survey respondents that reported to agree or strongly agree that they share the values or interests of NGOs in their region and trust them to act in the right way to influence political decision making	The European Digital Social Innovation Index (EDSII)
Culture of volunteerism	Charities Aid Foundation	45	2015	Education	Measures the average percentage of people in each country who donate money, volunteer or help a stranger	Social Innovation Index (EIU)

Indicator	Source	Number of countries covered	Periodicity	Fields of Action	Definition	Title of the project/ article / index/ survey
Civil society engagement	World Values Survey, European Social Survey	45	2014, or latest data available	Education	Proportion of respondents who are members (active or inactive) of a humanitarian or charitable organization	Social Innovation Index (EIU)
Immigration	Eurostat	32 (Europe)	2007-2018	Migration, Demographic Change	Total number of long-term immigrants arriving into the reporting country during the reference year	Improved Measurement of the Economics of Social Innovation (SIMPACT Project)
People at risk of poverty or social exclusion	Eurostat	28 (EU-27 and the UK)	2008-2019	Poverty	Percentage of persons who are at risk of poverty or severely materially deprived or living in households with very low work intensity	Improved Measurement of the Economics of Social Innovation (SIMPACT Project)

3.2 Entrepreneurship

In the last years, social enterprises and the efforts of entrepreneurs have become increasingly important in helping to discover solutions for social problems that have proved resistant to traditional means of resolution, by cutting across the traditional boundaries of public and private sector.

In addition, it is arguably impossible to innovate in any field without possessing some entrepreneurial characteristics, in particular the willingness to take risks.

This dimension includes a variety of indicators that are proxies for countries' capabilities to encourage entrepreneurship and risk-taking, as well as indicators that measure how easy it is for entrepreneurs to set up their operations. These include, amongst other, assessments both of the national "risk-taking mindset", businesses that aim to solve social problems, knowledge, skills and experience to start a new business, early-stage entrepreneurs with at least post-secondary education, and citizens' attitudes towards entrepreneurship, from the Global Entrepreneurship Monitor, and cost to start a business from the SME Performance Review, as well as an World Bank assessment of how easy it is to start a business, from the Improved Measurement of the Economics of Social Innovation (SIMPACT Project) (see Table 5).

Table 5. Summary of the indicators related to social innovation under the entrepreneurship dimension.

Indicator	Source	Number of countries covered	Periodicity	Fields of Action	Definition	Title of the project/ article / index/ survey
Risk-taking mindset	Global Entrepreneurship Monitor	45	2015-2019	Employment, Demographic Change	Population aged 18-64 with positive perceived opportunities who indicate that fear of failure would prevent them from setting up a business	Social Innovation Index (EIU)
Citizen's attitude towards entrepreneurship	Global Entrepreneurship Monitor	45	2015-2019	Employment, Demographic Change	Population aged 18-64 who agree with the statement that in their country, most people consider starting a business as a desirable career choice	Social Innovation Index (EIU)
Businesses that aim to solve social problems	Global Entrepreneurship Monitor	48	2019	Employment	In your country, you will often see businesses that primarily aim to solve social problems, agree/disagree	Global Entrepreneurship Monitor 2019/2020
Knowledge, skill and experience to start a new business	Global Entrepreneurship Monitor	50	2008-2019	Employment, Education	Percentage of all respondents (18-64): who say they have the knowledge, skill, and experience required to start a new business	Global Entrepreneurship Monitor 2019/2020
Early-stage entrepreneurs with at least post secondary education	Global Entrepreneurship Monitor	50	2008-2019	Employment, Education	Percentage of respondents within TEA: with at least post secondary education	Global Entrepreneurship Monitor 2019/2020

Indicator	Source	Number of countries covered	Periodicity	Fields of Action	Definition	Title of the project/ article / index/ survey
Starting a Business	World Bank Doing Business Data	193	2019	Employment	Number of procedures, time, cost and paid-in minimum capital requirement for a small- to medium-size limited liability company to start up and formally operate in each economy's largest business city	Improved Measurement of the Economics of Social Innovation (SIMPACT Project)
Presence of socially focused business support	F6S Crunchbase	26 (EU-27 and the UK)	Unclear	Employment, Health, Environment	Number of socially focused accelerators and incubators	The European Digital Social Innovation Index (EDSII)
Gender diversity within the tech sector	Crunchbase	26 (EU-27 and the UK)	Unclear, collected in 2018 in the EDSI	Gender	Percentage of founders of tech firms that are female	The European Digital Social Innovation Index (EDSII)
Business demography	Eurostat	28 (EU-27 and the UK)	2008-2017	Employment	Number of start-ups: Business demographics main variables	Improved Measurement of the Economics of Social Innovation (SIMPACT Project)
Cost to start a business (in Euro)	DG GROW H.1	28 (EU-27 and the UK)	2018	Employment	The cost of setting up a company include all the fees and costs associated with the necessary procedures	SME Performance Review 2018/2019

3.3 Financing

The literature highlights the importance of sustainable financing for developing social innovation. There are several financing options for developing social innovation, since it can operate in both the private and public sectors. Within this context, financing can come from a diverse set of sources, either at the public level through public funds or subsidies, as well as at the private side through capital funds.

This dimension includes two indicators targeting the availability of financing mechanisms related with equity capital and the ease of getting credit to support the development of social innovation activities. These indicators are included from The European Digital Social Innovation Index (EDSII) and the Social Innovation Index (EIU).

Four indicators are also included from the Improved Measurement of the Economics of Social Innovation (SIMPACT Project). These refer to the total public expenditure on social benefits (percentage of expenditure on social protection), including social benefits, administration costs and other expenditures, the total public expenditure on education (as percentage of GDP), the percentage of innovative enterprises that receive public funding and the total expenditure of charities and foundations (see Table 6).

Table 6. Summary of the indicators related to social innovation under the financing dimension.

Indicator	Source	Number of countries covered	Periodicity	Fields of Action	Definition	Title of the project/ article / index/ survey
Total public expenditure on social benefits	Eurostat	27 (Europe)	2006-2017	Health, Poverty	% of total expenditure on social protection	Improved Measurement of the Economics of Social Innovation (SIMPACT Project)
Public expenditure on education	Eurostat	30 (Europe + Turkey	2012-2016	Education	Public expenditure on education by education level and programme orientation - as % of GDP	Improved Measurement of the Economics of Social Innovation (SIMPACT Project)
Availability of seed grant funding	Survey carried out by Nesta for the EDSII	17 (EU-27 and the UK)	2019	Employment	Response to survey question asking the extent to which respondents agree or disagree that it is relatively easy for a promising DSI initiative to access grant funding in the first years of operation (anywhere up to around 200,000 €)	The European Digital Social Innovation Index (EDSII)
Ease of getting credit	World Bank	45	2015	Other	Measures the degree to which collateral and bankruptcy laws protect the rights of borrowers and lenders and thus facilitate lending. 12=very high. 0=non-existent	Social Innovation Index (EIU)

Indicator	Source	Number of countries covered	Periodicity	Fields of Action	Definition	Title of the project/ article / index/ survey
Innovation in high-tech sectors	Eurostat	32 (Europe + Turkey)	2008, 2010, 2012	Employment	Innovative enterprises that receive public funding as a % of total	Improved Measurement of the Economics of Social Innovation (SIMPACT Project)
Expenditure of charities and foundations	DAFNE Donors and Foundations Network Europe	28 (EU-27 and the UK)	2015-2018	Other	Total expenditure (in €) of charities and foundations	Improved Measurement of the Economics of Social Innovation (SIMPACT Project)

3.4 Infrastructure

The creation, growth and sustainability of social innovation initiatives is enabled by good infrastructure including digital (such as broadband and mobile internet and provision of open data) and physical (such as workspaces, accelerators and fablabs).

This dimension includes indicators (from The European Digital Social Innovation Index - EDSII) measuring the access to flexible workspace and to affordable and fast broadband and mobile internet, and the provision of open data (see Table 7).

In addition, this dimension includes indicators (from the Improved Measurement of the Economics of Social Innovation - SIMPACT Project) related with the percentage of households who have internet access at home and the infrastructure investment.

Table 7. Summary of the indicators related to social innovation under the infrastructure dimension.

Indicator	Source	Number of countries covered	Periodicity	Fields of Action	Definition	Title of the project/ article / index/ survey
Openness of data	Global Open Data Index	25 (EU-27 and the UK)	Annual 2013-2017	Other	Score from the Global Open Data index, an index measuring how governments are publishing and using open data for accountability, innovation and social impact	The European Digital Social Innovation Index (EDSII)

Indicator	Source	Number of countries covered	Periodicity	Fields of Action	Definition	Title of the project/ article / index/ survey
	Open Data barometer	22 (EU-27 and the UK)	Annual 2013-2017	Other	Score from Open Data Barometer, an index measuring the openness of government data in the following categories: Budget, Spending, Procurement, Election results, Company register, Land ownership, National maps, Administrative Boundaries, Locations, National statistics, Draft legislation, National law, Air quality and Water quality	The European Digital Social Innovation Index (EDSII)
Access to affordable and fast broadband and mobile internet	Speedtest by Ookla	26 (EU-27 and the UK)	2016 – now	Other	Average mobile download speed (over 9-month period)	The European Digital Social Innovation Index (EDSII)
	Speedtest by Ookla	26 (EU-27 and the UK)	2016 – now	Other	Average mobile upload speed (over 9-month period)	The European Digital Social Innovation Index (EDSII)
	Speedtest by Ookla	26 (EU-27 and the UK)	2016 – now	Other	Average mobile latency (over 9-month period)	The European Digital Social Innovation Index (EDSII)
	Speedtest by Ookla	26 (EU-27 and the UK)	2016 – now	Other	Average broadband download speed (over 9-month period)	The European Digital Social Innovation Index (EDSII)
	Speedtest by Ookla	26 (EU-27 and the UK)	2016 – now	Other	Average broadband upload speed (over 9-month period)	The European Digital Social Innovation Index (EDSII)

Indicator	Source	Number of countries covered	Periodicity	Fields of Action	Definition	Title of the project/ article / index/ survey
	Speedtest by Ookla	26 (EU-27 and the UK)	2016 – now	Other	Average broadband latency (over 9-month period)	The European Digital Social Innovation Index (EDSII)
Access to flexible workspace	coworker.com	26 (EU-27 and the UK)	2015 – now	Employment	Number of coworking spaces (per capita)	The European Digital Social Innovation Index (EDSII)
Level of internet access – house holds	Eurostat	34 (Europe + Turkey)	2008-2019	Demographic Change, Poverty	Percentage of households who have internet access at home. All forms of internet use are included. The population considered is aged 16 to 74	Improved Measurement of the Economics of Social Innovation (SIMPACT Project)
Infrastructure Investment	OECD	48 (Worldwide)	2014-2018	Other	Spending on new transport construction and the improvement of the existing network (Road / Rail / Air, Euro)	Improved Measurement of the Economics of Social Innovation (SIMPACT Project)

3.5 Knowledge and skills

In terms of the knowledge and skills dimension, the literature addresses the need for having both technical and non-technical skills for the effective development of social innovation initiatives. Thus, both hard and soft skills are needed for promoting social innovation (e.g. data and communication skills), as well as the diversity of knowledge and competences, concerning employment and participation in the labour market related issues, and symbolic knowledge, which is key to implement new social innovative solutions. Moreover, skills such as HR, marketing, design, media and others are considered of important for the development of social innovation initiatives.

In this context, this dimension includes, amongst other, indicators (from The European Digital Social Innovation Index - EDSII and from the Improved Measurement of the Economics of Social Innovation – SIMPACT Project) measuring the access to soft and hard skills, as well as the level of employment by gender, age and occupation (see Table 8).

Table 8. Summary of the indicators related to social innovation under the Knowledge and skills dimension.

Indicator	Source	Number of countries covered	Periodicity	Fields of Action	Definition	Title of the project/ article / index/ survey
Access to business, HR, legal, marketing, design and media support	Eurostat	26 (EU-27 and the UK)	Annual 2008-2018	Employment, Demographic Change	Number of employees working in advertising and market research activities (per active population [age 15 - 64])	The European Digital Social Innovation Index (EDSII)
Employment by sex, age and economic activity	Eurostat	35 (Europe + Turkey)	2008-2019	Employment, Gender, Health	Number of workers in human health and social activities (NACE Rev. 2 code Q)	Improved Measurement of the Economics of Social Innovation (SIMPACT Project)
Access to employees with data skills	Eurostat	26 (EU-27 and the UK)	Annual 2008-2018	Employment	Number of employees working in legal and accounting activities; activities of head offices; management consultancy activities (per active population [age 15 - 64])	The European Digital Social Innovation Index (EDSII)
	Eurostat	26 (EU-27 and the UK)	Annual 2008-2018	Employment, Demographic Change	Number of employees working in financial and insurance activities (per active population [age 15 - 64])	The European Digital Social Innovation Index (EDSII)
	Eurostat	26 (EU-27 and the UK)	Annual 2008-2018	Employment, Demographic Change	Number of employees working in administrative and support service activities (per active population [age 15 - 64])	The European Digital Social Innovation Index (EDSII)
	Eurostat	26 (EU-27 and the UK)	Annual 2008-2018	Employment, Demographic Change	Number of employees working in employment activities (per active population [age 15 - 64])	The European Digital Social Innovation Index (EDSII)
Digital inclusion and skills in population	DESI	26 (EU-27 and the UK)	Annual, 2014-2019	Employment, Education	Score for basic skills and usage Sub dimension of human capital dimension of DESI index	The European Digital Social Innovation Index (EDSII)

Indicator	Source	Number of countries covered	Periodicity	Fields of Action	Definition	Title of the project/ article / index/ survey
Health personnel	Eurostat	37 (Europe + Turkey)	2014-2018	Health	Number of health personnel (excluding nursing and caring professionals)	Improved Measurement of the Economics of Social Innovation (SIMPACT Project)
Research on SI (publications & patents)	Patstat, Scopus and EU OpenAIRE	NA	NA	Education	Research developed on SI (publications & patents)	Improved Measurement of the Economics of Social Innovation (SIMPACT Project)
Patents in environment-related technologies	OECD	World (including EU-27 and the UK)	1999-2017	Environment	Patents for climate change mitigation technologies	Blueprint of social innovation metrics: contributions to an understanding of opportunities and challenges of social innovation measurement

3.6 Political and institutional framework

The literature shows that among the many factors that are relevant to a country's capacity to develop and encourage social innovation, the quality of its policy and institutional framework is one of the most important.

One reason for this is that public bodies themselves are sources for financing and pioneers of social innovation. In addition to providing financing, public bodies need to establish a fruitful environment for scaling social innovation, designing appropriate policies and creating a legal framework for social enterprises.

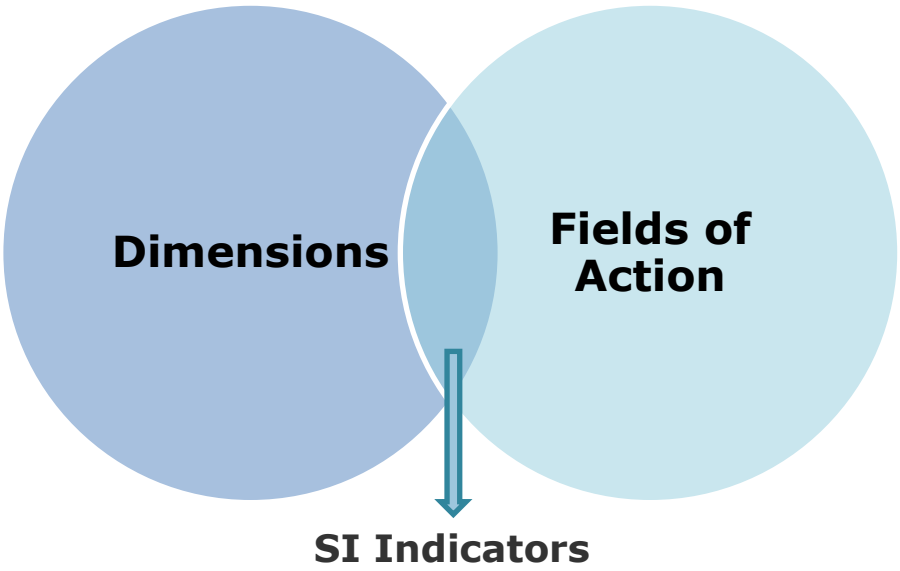
This dimension includes (amongst other) indicators from The European Digital Social Innovation Index (EDSII) and from the Social Innovation Index – EIU, which measures the extent to which countries have policies to support social innovation, and the legal framework for social enterprises (see Table 9).

Table 9. Summary of the indicators related to social innovation under the Political and institutional framework dimension.

Indicator	Source	Number of countries covered	Periodicity	Fields of Action	Definition	Title of the project/ article / index/ survey
Presence of supportive government policy for social purpose initiatives	Survey carried out by Nesta for the EDSII	17 (EU-27 and the UK)	2019	Other	Response to survey question asking the extent to which respondents agree or disagree that government policies are supportive of social purpose initiatives, social innovation and social enterprise through policies such as specific legal forms, tax relief and fiscal incentives or financing mechanisms	The European Digital Social Innovation Index (EDSII)
Existence of national policy on social innovation	EIU analysis	45	2015	All	The existence of a government-led national policy to encourage social innovation	Social Innovation Index (EIU)
Legal framework for social enterprises	EIU analysis	45	2015	All	The existence of specific regulatory frameworks for social enterprises, social entrepreneurs and other social innovation businesses	Social Innovation Index (EIU)
Political participation	EIU Business Environment Ratings	45	2015	Education	Willingness of citizens to participate in public debate, elect representatives and join political parties	Social Innovation Index (EIU)
Quality of Government	European Quality of Government Index (EQI)	28 (EU-27 and the UK)	2010, 2013, 2017	Other	High impartiality and quality of public service delivery, along with low corruption	Improved Measurement of the Economics of Social Innovation (SIMPACT Project)
Effectiveness of system in policy implementation	EIU Business Environment Ratings	45	2015	All	The effectiveness of policy implementation and execution rating scores countries. 5=very high. 1=very low	Social Innovation Index (EIU)

4 Link between fields of action, dimensions and indicators

The defined dimensions and fields of action are both related with the indicators that measure social innovation. As detailed, each indicator is related with a specific framework condition (dimension) that assesses the capacity to enable social innovation in that specific field. The definition of dimensions is established under each project / article / index / survey analysed within the project scope. At the same time, each indicator has been linked with specific fields of action that categorize social innovation activities according to the different societal challenges and transversal themes. Within this context, each dimension can include indicators that are associated to different fields of action. The figure below shows the relationship between the three concepts.

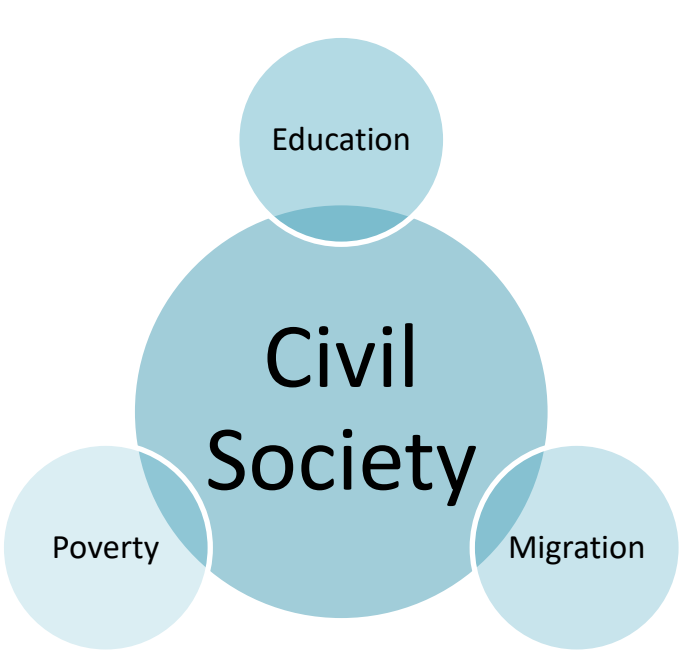


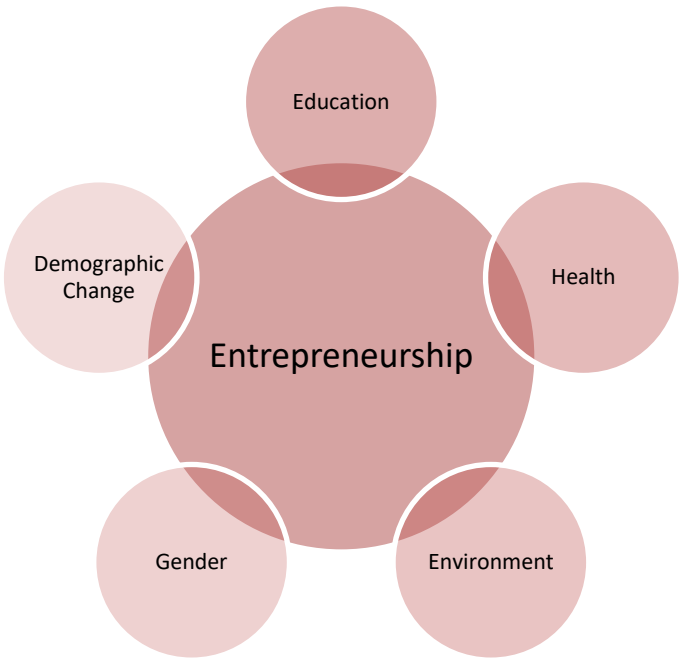
Through the links between dimensions, social innovation indicators, and fields of action, the project team is better able to understand which fields of action are most related to the six specific dimensions selected. This analysis allows understanding which societal challenges and transversal themes are connected to different dimensions of social innovation. It should be noted that a set of indicators that cannot be categorized in any of the fields of action defined are listed as "other" – which does make the assessing of the connection of specific fields of action with the dimensions more difficult. It is also relevant to note that each indicator can be associated to one or more fields of action.

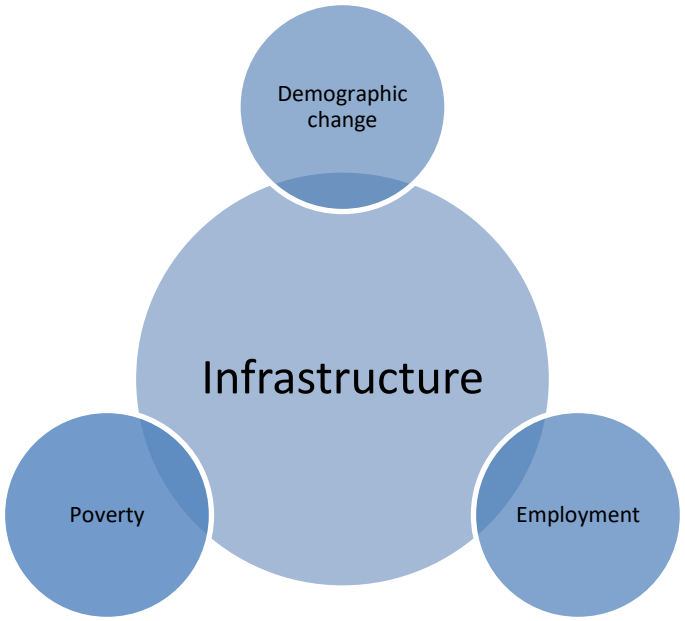
According to the summary of indicators related to social innovation by dimension (tables included under Chapter 3), it is possible to highlight some relevant connections between the three groups:

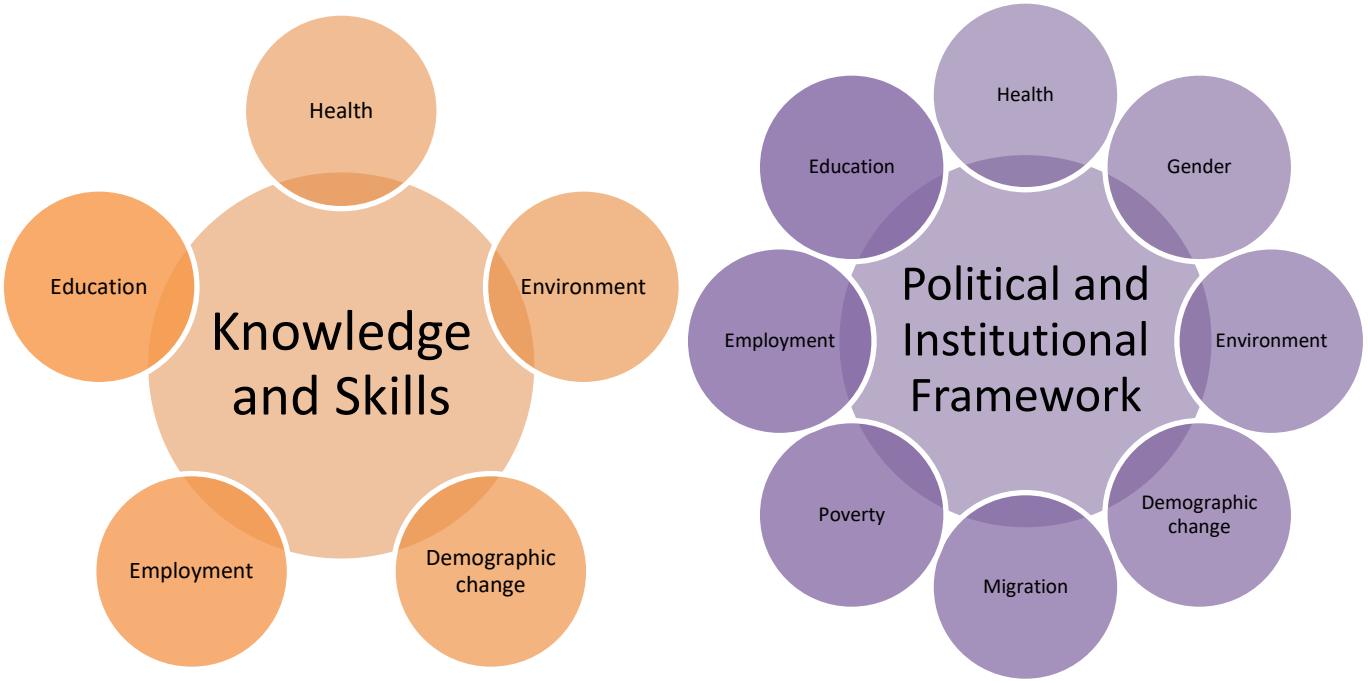
- Civil Society dimension includes mainly indicators that are part of the Education, Migration and Poverty fields of action;
- Entrepreneurship dimension mainly includes indicators that are part of the Employment, Demographic Change, Health, Environment, Education and Gender fields of action. Employment and demographic change are directly related to entrepreneurship and include important aspects to be measured. Furthermore, two indicators concerning socially focused businesses and diversity were included which are part of fields of action related with Health, Environment and Gender;
- Financing dimension includes indicators that are part of the Employment, Education, Health and Poverty fields of action. In many cases, Employment is the main field of action in indicators under the Financing dimension;
- Infrastructure dimension include mainly indicators that fit into any of the fields of action defined under this document – "other". However, there are two indicators that are related with Employment, Demographic Change and Poverty fields of action;

- Knowledge and Skills dimension mainly includes indicators that are mainly part of the Employment and Demographic Change fields of action. Moreover, there are some indicators related with Health, Education and Environment fields of action;
- Political and Institutional Framework dimension includes indicators that fit into all the fields of action defined under this document. Nevertheless, some indicators are related to fields of action that are not included under this document ("other").









In addition, and as described by the social innovation experts during the interview process, there is no clear set of indicators that can measure social innovation – this can be verified by the large set of dimensions and fields of actions identified that are related to social innovation.

The experts also agreed that social innovation can occur in several fields of action at the same time. As previously described, the selected indicators tend to focus on several fields of action and in one specific dimension. Thus, social innovation can contribute to solving several problems at once, e.g. the indicator "presence of socially focused business support" contributes to supporting employment, health and environment-related issues. However, and as detailed in Chapter 2, the indicators tend to focus on certain fields of action, in particular Employment and Education. Furthermore, the links between fields of action, dimensions and indicators clearly shows that Employment is the field of action that is included in five of the six listed dimensions – this is not the case only in the Civil Society dimension.

5 Possible indicators to include in the European Innovation Scoreboard

Social innovation is a concept that aims to tackle societal challenges in order to create tangible business benefits. Furthermore, social innovation strategies support companies in their business innovation agenda, by leveraging assets such as human capital, technology and distribution systems, and is increasingly being part of a company's core units or departments. According to the World Economic Forum (WEF)[5], social innovation supports companies to restore trust in businesses, adapt to resource scarcity and environmental issues, attracts new and skilled talent, changes how to measure performance, and promotes growth and inclusion. Thus, social innovation brings not only financial benefits, but also supports long-term competitiveness, acting as a key element in business innovation. Within this context, this chapter aims to provide an initial list of indicators that measure social innovation and that can be included in the EIS.

There remains a relatively large number of indicators associated with social innovation in Chapter 3. As one of the objectives of the Report B is to identify a limited number of indicators which could be considered for the European Innovation Scoreboard in 2021, an initial selection has been done according to the following criteria:

- Indicators that come from regular and reliable sources (including, for example, Eurostat, OECD and the World Bank);
- Indicators that are up-to-date (that have been published in 2018 or 2019);
- Indicators that cover at least EU-27 countries;
- Indicators that do not represent perceptions or opinions;
- Indicators that are relevant to social innovation – the project team has defined three levels of relevance (three "✓✓✓" representing the most relevant and one "✓" representing the least relevant) according to the specific focus of the indicator in social innovation:
    - "✓" – the indicator is not related to social innovation. It is considered that the indicator assesses mainly other aspects of innovation (e.g. economic, environmental aspects);
    - "✓✓" – the indicator is partially related to social innovation. It is considered that the indicator partially assesses social innovation. However, indicators with this level of relevance are considered to have a moderate focus on other aspects of innovation.
    - "✓✓✓" – the indicator is very much related to social innovation. It is considered that the indicator assesses social-related issues and thus provides a good understanding of social aspects.

The selection criteria have been applied to the indicators included in Chapter 3, as detailed in Table 10.

Table 10. Criteria by indicator.

Indicator/ criterion	Regular and reliable sources	Up-to-date	Cover at least EU-27 countries	Not represent perceptions or opinions	Relevance to social innovation
Social cohesion	✓	✓	✓		✓
Positive attitudes to civil society	✓				✓
Culture of volunteerism	✓	✓	✓	✓	✓✓✓
Civil society engagement	✓		✓	✓	✓
Immigration	✓	✓	✓	✓	✓

[5] https://reports.weforum.org/social-innovation/why-social-innovation-matters-to-business/?doing_wp_cron=1594904603.5725760459899902343750

Indicator/ criterion	Regular and reliable sources	Up-to-date	Cover at least EU-27 countries	Not represent perceptions or opinions	Relevance to social innovation
People at risk of poverty or social exclusion	✓	✓	✓	✓	✓✓
Risk-taking mindset	✓	✓			✓
Citizen's attitude towards entrepreneurship	✓	✓			✓
Businesses that aim to solve social problems	✓	✓			✓✓✓
Knowledge, skill and experience to start a new business	✓	✓			✓
Early-stage entrepreneurs with at least post-secondary education	✓	✓			✓
Starting a business	✓	✓	✓	✓	✓
Presence of socially focused business support	✓	✓		✓	✓✓✓
Diversity within the tech sector	✓	✓		✓	✓
Business demography	✓	✓	✓	✓	✓
Cost to start a business (in Euro)	✓	✓	✓	✓	✓
Total public expenditure on social benefits	✓		✓	✓	✓✓
Public expenditure on education	✓			✓	✓
Availability of seed grant funding					✓
Ease of getting credit	✓	✓	✓		✓
Innovation in high-tech sectors	✓		✓	✓	✓
Expenditure of charities and foundations			✓	✓	✓✓
Openness of data	✓			✓	✓
Access to affordable and fast broadband and mobile internet	✓	✓		✓	✓

Indicator/ criterion	Regular and reliable sources	Up-to-date	Cover at least EU-27 countries	Not represent perceptions or opinions	Relevance to social innovation
Access to flexible workspace	✓	✓		✓	✓
Level of internet access – households	✓	✓	✓	✓	✓
Infrastructure investment	✓	✓	✓	✓	✓
Access to business, HR, legal, marketing, design and media support	✓	✓		✓	✓
Employment by sex, age and economic activity	✓	✓	✓	✓	✓
Access to employees with data skills	✓	✓		✓	✓
Digital inclusion and skills in population	✓	✓		✓	✓
Health personnel	✓	✓	✓	✓	✓
Research on SI (publications & patents)	✓	✓	✓	✓	✓✓
Patents in environment-related technologies	✓		✓	✓	✓
Presence of supportive government policy for social purpose initiatives	✓	✓			✓✓
Existence of national policy on social innovation	✓			✓	✓✓
Legal framework for social enterprises			✓	✓	✓✓
Political participation			✓		✓
Quality of government	✓		✓	✓	✓
Effectiveness of system in policy implementation			✓	✓	✓

According to the criteria developed, a list of indicators that could be included in the EIS has been selected. Each indicator included in this initial selection is classified both by fields of action and dimension. The indicators were selected according to the following:

1. Indicators that have two "✓✓" on "Relevance to social innovation" and fulfil at least three out of the four other criteria; or
2. Indicators that have three "✓✓✓" on "Relevance to social innovation".

Taking into account the above-mentioned criteria, a total of six indicators have been selected:

1. People at risk of poverty or social exclusion;
2. Culture of volunteerism;
3. Presence of socially focused business support;
4. Total public expenditure on social benefits;
5. Research on SI (publications & patents);
6. Businesses that aim to solve social problems.

The project team also took into account the opinions from the social innovation experts interviewed under this study and that have participated in the project workshop. Moreover, there is a need to further understand how each indicator relates to social innovation activities and their relevance to the EIS.

Regarding the possible indicators to include in the EIS, and according to the experts' opinions, it is difficult to provide a model that fully measures social innovation in a country. In particular, social innovation is a complex phenomenon, addressing several aspects of certain activities. Furthermore, it is a challenge to collect data on attitudes across different countries in comparison with other data related to innovation. It is also emphasised that as there is not a common consensus on the definition of social innovation, it is not possible to measure. However, it was also highlighted that an effort to build an initial index should be made – and further adaptations to the index can be made over time.

6 Testing of possible indicators to include in the European Innovation Scoreboard

This Chapter presents the results of the testing considering the relevant selected indicators identified in Chapter 5.

For each selected indicator, a detailed description is presented, taking into account the following information: indicator in Chapter 5, indicator tested, dimension, field(s) of action, definition, source, relation with social innovation, relevance to the EIS, years, data availability and number of countries with data available.

The methodology for calculating innovation performance based on these indicators is the same employed in the EIS and includes identifying and replacing outliers, setting reference years, imputing for missing values, determining maximum and minimum scores (using data for an eight-year period), transforming data that have highly skewed distributions across countries, calculating re-scaled scores and calculating composite innovation indexes.

In addition, relevance to the scientific literature for two of the tested indicators (people at risk of poverty and social exclusion and total public expenditure on social benefits) is assessed, taking into account the concept of social innovation, and exploring their suitableness for the scoreboard.

6.1 People at risk of poverty or social exclusion

Indicator in Chapter 5: People at risk of poverty or social exclusion

Indicator tested: Percentage of people at no risk of poverty or social exclusion[6]

Dimension: Civil society

Field(s) of action: Poverty – including marginalization

Definition: Percentage of persons who are at risk of poverty or severely materially deprived or living in households with very low work intensity.

Source: Eurostat

Relation with social innovation: The concept of welfare is deeply connected with the aspects of poverty and social exclusion. These aspects can lead to the marginalization of communities and thus depriving them of basic health, education and economic services. This indicator allows to identify a social challenge (related to people that face economic and social difficulties), which social innovation should address. Thus, the indicator measures the need for social innovation actions in relation to poverty and social exclusion. Furthermore, this indicator is closely connected with the poverty dimension where social innovation occurs. Thus, an increased number of social innovation initiatives and actions occur when the levels of poverty or people at risk of social exclusion are higher. Taking this into account, this indicator is considered of great relevance to social innovation.

Relevance to the EIS: Poverty and social exclusion serve as barriers to the development of new businesses and innovation actions at the community level. Within this context, it is relevant to understand the phenomenon in order to relate it with the innovation development at the national and regional level.

Years: 2012-2019

Data availability[7]: 94.5%

Number of countries with data available: 35 out of 37 (countries missing: Israel and Ukraine)

The figure below shows the relationship between the percentage of people at no risk of poverty or social exclusion indicator and the overall EIS 2020 SII scores.

[6] The inverse of the indicator (100-x) is considered, to understand the countries which have the lowest percentage of people at risk of poverty or social exclusion.

[7] Data availability refers to the total number of data available (data available per year in each country) over the total possible data available (number of countries times number of years).

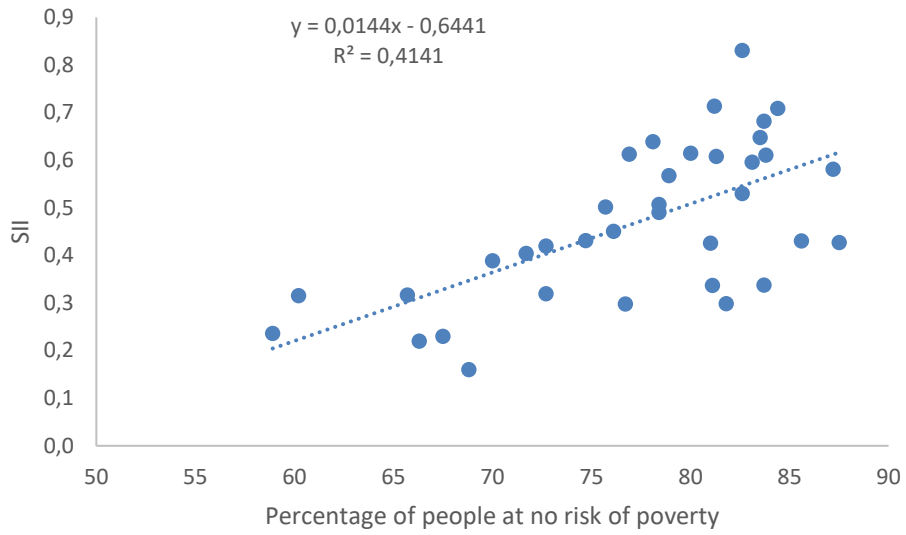


Figure 4. Correlation between the percentage of people at no risk of poverty or social exclusion indicator and the overall EIS 2020 SII scores.

The equation obtained by regressing the SII with this indicator is the following:

$$SII = 0.0144PRP - 0.6441$$

where PRP is the value of the percentage of people at no risk of poverty or social exclusion indicator. The correlation analysis shows that increasing the value of the percentage of people at no risk of poverty or social exclusion by one unit increases the overall SII score by approximately 0.0144 units.
The table below shows the SII and the ranking changes that occur with the inclusion of the percentage of people at no risk of poverty or social exclusion indicator. As shown in the table, the impact on the SII is small for most of the countries and the difference is positive[8] (0.006) for the EU27 overall. For 31 out of the 37 countries SII is positively affected and for four countries negatively affected. Czech Republic is the country which has been most affected in terms of SII (with a positive variation of 0.019).

[8] The table has been colour-coded for the columns "SII" and "Ranking" – green cells indicating positive change, red cells indicating negative change, and uncoloured cells indicating no change.

Table 11. Changes in EIS caused by adding the percentage of people at no risk of poverty or social exclusion indicator.

Country	EIS 2020		NEW – People at no risk of poverty				Differences	
	SII	Rank	Value	Normalised	SII	Rank	SII	Rank
CH	0.831	1	82.600	0.803	0.830	1	-0.001	0
SE	0.713	2	81.200	0.758	0.715	2	0.002	0
FI	0.709	3	84.400	0.860	0.715	3	0.005	0
DK	0.682	4	83.700	0.838	0.688	4	0.006	0
NL	0.648	5	83.500	0.831	0.655	5	0.007	0
LU	0.639	6	78.100	0.659	0.640	6	0.001	0
BE	0.615	7	80.000	0.720	0.619	8	0.004	-1
UK	0.613	8	76.900	0.621	0.613	9	0.000	-1
NO	0.611	9	83.800	0.841	0.619	7	0.008	2
DE	0.608	10	81.300	0.761	0.613	10	0.005	0
AT	0.596	11	83.100	0.818	0.604	11	0.008	0
IS	0.581	12	87.200	0.949	0.597	12	0.016	0
IE	0.568	13	78.900	0.685	0.572	13	0.004	0
IL	0.550	14	:	:	0.550	14	0.000	0
FR	0.530	15	82.600	0.803	0.540	15	0.010	0
EU27	0.507		78.400	0.669	0.513	0	0.006	
EE	0.502	16	75.700	0.583	0.505	16	0.003	0
PT	0.490	17	78.400	0.669	0.497	17	0.006	0
CY	0.451	18	76.100	0.596	0.456	18	0.005	0
ES	0.432	19	74.700	0.551	0.436	22	0.004	-3
SI	0.431	20	85.600	0.898	0.447	19	0.017	1
CZ	0.427	21	87.500	0.959	0.446	20	0.019	1
MT	0.426	22	81.000	0.752	0.438	21	0.012	1
IT	0.420	23	72.700	0.487	0.422	23	0.002	0
LT	0.404	24	71.700	0.455	0.406	24	0.002	0
EL	0.389	25	70.000	0.401	0.389	25	0.000	0
SK	0.338	26	83.700	0.838	0.356	26	0.018	0
HU	0.337	27	81.100	0.755	0.352	27	0.015	0
LV	0.320	28	72.700	0.487	0.326	28	0.006	0
RS	0.317	29	65.700	0.264	0.315	30	-0.002	-1
TR	0.316	30	60.200	0.089	0.307	32	-0.009	-2
PL	0.299	31	81.800	0.777	0.316	29	0.017	2
HR	0.298	32	76.700	0.615	0.309	31	0.011	1
MK	0.236	33	58.900	0.048	0.228	34	-0.008	-1
BG	0.230	34	67.500	0.322	0.234	33	0.003	1
ME	0.220	35	66.300	0.283	0.223	35	0.003	0
UA	0.165	36	:	:	0.165	37	0.000	-1
RO	0.160	37	68.800	0.363	0.168	36	0.007	1

In terms of the suitableness of the indicator to the EIS, and having in mind the scientific literature, it is relevant to highlight that reducing poverty and social exclusion are primarily a societal challenge, but also have a profound impact on the individual's live. Policies aiming to reduce poverty among vulnerable groups often focus on educational support or micro-loans for entrepreneurship (Smith, et al, 2019, pp. 107-116; Jacobi, et al., 2017, pp. 153-158). An indicator accessing the risk of poverty and social exclusion is an appropriate estimation if other indicators such as starting a business and presence of socially focussed business support are included in the analysis. However, the current set of indicators does not look at education among vulnerable groups, because it would overlap with other education indicators within the EIS' index. As a result, it weakens the composition of the social innovation dimension, which explains the relatively low correlation for people at no risk of poverty or social exclusion.

6.2 Culture of volunteerism

Indicator in Chapter 5: Culture of volunteerism

Indicator tested: Culture of volunteerism

Dimension: Civil society

Field(s) of action: Education

Definition: Average percentage of people in each country who donate money, volunteer or help a stranger.

Source: Charities Aid Foundation

Relation with social innovation: Volunteerism is one of the key aspects that concern social innovation – according to the literature review and feedback received from the experts. Social Innovation organizations many times are composed of volunteers, being a key resource for non-profit organizations. Volunteers also represent the social capital of the territories[9]. This indicator measures directly the development of volunteerism as a means to support social innovation. It also supports the assessment of the contextual setting where social innovation occurs. In addition, the indicator shows that social-related actions are most likely to occur in countries that have a higher culture of volunteerism.

Relevance to the EIS: Many organizations within the social innovation field depend on grants and support from voluntary organizations. Thus, the development of social innovation actions is highly dependent on the culture of volunteerism in a certain region or country, promoting the development of social-related actions and businesses.

Years: 2012-2017

Data availability: 100%

Number of countries with data available: 37

The figure below shows the relationship between the culture of volunteerism indicator and the overall EIS 2020 SII scores.

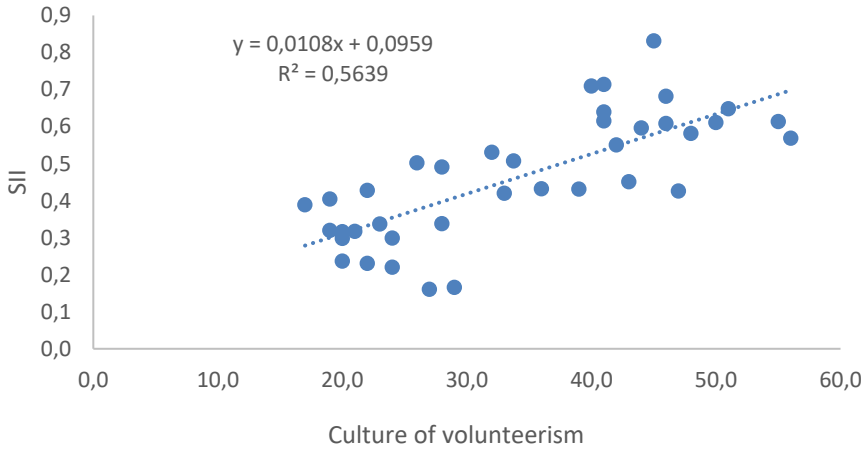


Figure 5. Correlation between the culture of volunteerism indicator and the overall EIS 2020 SII scores.

The equation obtained by regressing the SII with this indicator is the following:

$$SII = 0.0108CV + 0.0959$$

where CV is the value of the culture of volunteerism indicator. The correlation analysis shows that increasing the value of the culture of volunteerism by one unit increases the overall SII score by approximately 0.0108 units.
The table below shows the SII and the ranking changes that occur with the inclusion of the culture of volunteerism indicator. As shown in the table, the impact on the SII is small for most of the countries

[9] Improved Measurement of the Economics of Social Innovation (SIMPACT Project)

and the difference is negative (0.001) for the EU27 overall. For 19 out of the 37 countries SII is positively affected and for 18 countries negatively affected. Republic of Ireland is the country which has been most affected in terms of SII (with a positive variation of 0.015).

Table 12. Changes in EIS caused by adding the culture of volunteerism indicator.

Country	EIS 2020		NEW – Culture of volunteerism				Differences	
	SII	Rank	Value	Normalised	SII	Rank	SII	Rank
CH	0.831	1	45.00	0.73	0.827	1	-0.004	0
SE	0.713	2	41.00	0.64	0.711	2	-0.003	0
FI	0.709	3	40.00	0.61	0.706	3	-0.003	0
DK	0.682	4	46.00	0.75	0.684	4	0.002	0
NL	0.648	5	51.00	0.86	0.656	5	0.008	0
LU	0.639	6	41.00	0.64	0.639	6	0.000	0
BE	0.615	7	41.00	0.64	0.616	9	0.001	-2
UK	0.613	8	55.00	0.95	0.625	7	0.012	1
NO	0.611	9	50.00	0.84	0.619	8	0.008	1
DE	0.608	10	46.00	0.75	0.613	10	0.005	0
AT	0.596	11	44.00	0.70	0.600	11	0.004	0
IS	0.581	12	48.00	0.80	0.591	12	0.009	0
IE	0.568	13	56.00	0.98	0.583	13	0.015	0
IL	0.550	14	42.00	0.66	0.556	14	0.005	0
FR	0.530	15	32.00	0.43	0.526	15	-0.004	0
EU	0.507		33.74	0.47	0.506	0	-0.001	
EE	0.502	16	26.00	0.30	0.495	16	-0.007	0
PT	0.490	17	28.00	0.34	0.485	17	-0.005	0
CY	0.451	18	43.00	0.68	0.459	18	0.008	0
ES	0.432	19	36.00	0.52	0.435	21	0.003	-2
SI	0.431	20	39.00	0.59	0.436	20	0.006	0
CZ	0.427	21	22.00	0.20	0.419	23	-0.008	-2
MT	0.426	22	47.00	0.77	0.439	19	0.013	3
IT	0.420	23	33.00	0.45	0.421	22	0.001	1
LT	0.404	24	19.00	0.14	0.395	24	-0.010	0
EL	0.389	25	17.00	0.09	0.378	25	-0.011	0
SK	0.338	26	28.00	0.34	0.338	26	0.000	0
HU	0.337	27	23.00	0.23	0.333	27	-0.004	0
LV	0.320	28	19.00	0.14	0.313	28	-0.007	0
RS	0.317	29	21.00	0.18	0.311	29	-0.005	0
TR	0.316	30	20.00	0.16	0.310	30	-0.006	0
PL	0.299	31	24.00	0.25	0.297	31	-0.002	0
HR	0.298	32	20.00	0.16	0.293	32	-0.005	0
MK	0.236	33	20.00	0.16	0.233	33	-0.003	0
BG	0.230	34	22.00	0.20	0.230	34	-0.001	0
ME	0.220	35	24.00	0.25	0.221	35	0.001	0
UA	0.165	36	29.00	0.36	0.174	36	0.009	0
RO	0.160	37	27.00	0.32	0.166	37	0.006	0

6.3 Presence of socially focused business support

Indicator in Chapter 5: Presence of socially focused business support

Indicator tested: Presence of socially focused business support per billion GDP

Dimension: Entrepreneurship

Field(s) of action: Employment, Health, Environment

Definition: Number of socially focused accelerators and incubators per billion GDP.

Source: F6S and Crunchbase (Number of socially focused accelerators and incubators) and Eurostat (GDP). Socially focused accelerators and incubators can be identified on F6S by selecting in the Apply to Accelerators in the bottom navigation bar the filters "Location, Europe" and "Markets, Social Innovation, Social Entrepreneurship and Social Enterprise", and on Crunchbase by selecting in the Query builder in the Advanced tab the filters "Investor Details, Investor Type, Accelerator", "Industries, Industries, Social, Social Entrepreneurship and Social Impact" and "Basic Info, Location, Europe".

Relation with social innovation: This indicator assesses business activities from accelerators and incubators that address social aspects. This indicator is of great relevance to social innovation as it directly measures the number of accelerators and incubators that are targeting social businesses. Thus, it is expected that the countries with higher presence of socially focused business support are more likely to have social innovation occurring at the business level.

Relevance to the EIS: This indicator measures the business focus of accelerators and incubators towards social innovation and other related activities.

Years: 2019

Data availability: 70.2%

Number of countries with data available: 26 out of 37 (countries missing: Iceland, Israel, Luxembourg, North Macedonia, Malta, Montenegro, Norway, Serbia, Switzerland, Turkey and Ukraine)

The figure below shows the relationship between the presence of socially focused business support per billion GDP indicator and the overall EIS 2020 SII scores.

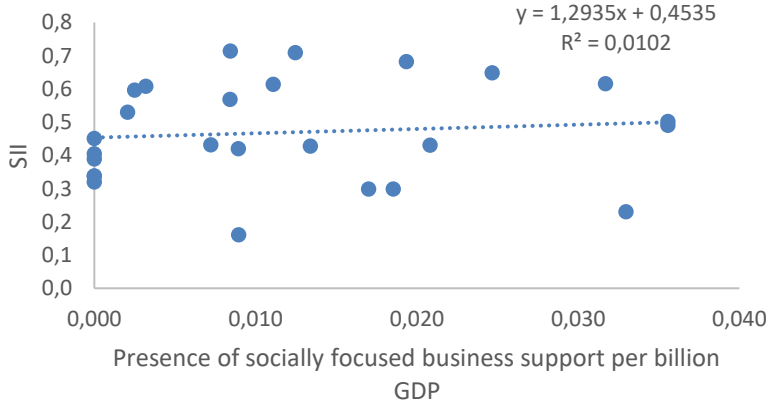


Figure 6. Correlation between the presence of socially focused business support per billion GDP indicator and the overall EIS 2020 SII scores.

The equation obtained by regressing the SII with this indicator is the following:

$$SII = 1.2935PSBS + 0.4535$$

where PSBS is the value of the presence of socially focused business support per billion GDP indicator. The correlation analysis shows that increasing the value of the presence of socially focused business support per billion GDP by one unit increases the overall SII score by approximately 1.2935 units.
The table below shows the SII and the ranking changes that occur with the inclusion of the presence of socially focused business support per billion GDP indicator. As shown in the table, the impact on the SII is small for most of the countries. For nine out of the 37 countries SII is positively affected and for 17

countries negatively affected. Bulgaria is the country which has been most affected in terms of SII (with a positive variation of 0.025).

Table 13. Changes in EIS caused by adding the presence of socially focused business support per billion GDP indicator.

Country	EIS 2020		NEW – Presence of socially focused business support				Differences	
	SII	Rank	Value	Normalised	SII	Rank	SII	Rank
CH	0.831	1	:	:	0.831	1	0.000	0
SE	0.713	2	0.01	0.237	0.696	3	-0.017	-1
FI	0.709	3	0.01	0.351	0.696	2	-0.013	1
DK	0.682	4	0.02	0.544	0.677	4	-0.005	0
NL	0.648	5	0.02	0.694	0.650	5	0.002	0
LU	0.639	6	:	:	0.639	6	0.000	0
BE	0.615	7	0.03	0.891	0.625	7	0.010	0
UK	0.613	8	0.01	0.312	0.602	9	-0.011	-1
NO	0.611	9	:	:	0.611	8	0.000	1
DE	0.608	10	0.00	0.090	0.589	10	-0.019	0
AT	0.596	11	0.00	0.071	0.577	12	-0.019	-1
IS	0.581	12	:	:	0.581	11	0.000	1
IE	0.568	13	0.01	0.237	0.556	13	-0.012	0
IL	0.550	14	:	:	0.550	14	0.000	0
FR	0.530	15	0.00	0.058	0.513	16	-0.017	-1
EU	0.507		0.01	0.242	0.498	0	-0.009	
EE	0.502	16	0.04	1.000	0.520	15	0.018	1
PT	0.490	17	0.04	1.000	0.509	17	0.018	0
CY	0.451	18	0.00	0.000	0.435	19	-0.016	-1
ES	0.432	19	0.01	0.203	0.423	22	-0.008	-3
SI	0.431	20	0.02	0.586	0.436	18	0.006	2
CZ	0.427	21	0.01	0.377	0.426	21	-0.002	0
MT	0.426	22	:	:	0.426	20	0.000	2
IT	0.420	23	0.01	0.251	0.414	23	-0.006	0
LT	0.404	24	0.00	0.000	0.390	24	-0.014	0
EL	0.389	25	0.00	0.000	0.375	25	-0.014	0
SK	0.338	26	0.00	0.000	0.326	26	-0.012	0
HU	0.337	27	0.00	0.000	0.325	27	-0.012	0
LV	0.320	28	0.00	0.000	0.308	30	-0.011	-2
RS	0.317	29	:	:	0.317	28	0.000	1
TR	0.316	30	:	:	0.316	29	0.000	1
PL	0.299	31	0.02	0.478	0.305	32	0.006	-1
HR	0.298	32	0.02	0.521	0.306	31	0.008	1
MK	0.236	33	:	:	0.236	34	0.000	-1
BG	0.230	34	0.03	0.927	0.255	33	0.025	1
ME	0.220	35	:	:	0.220	35	0.000	0
UA	0.165	36	:	:	0.165	36	0.000	0
RO	0.160	37	0.01	0.252	0.164	37	0.003	0

6.4 Total public expenditure on social benefits

Indicator in Chapter 5: Total public expenditure on social benefits

Indicator tested: Total public total expenditure on social benefits as percentage of GDP.

Dimension: Financing

Field(s) of action: Health, Poverty

Definition: Total of public expenditure on social protection as percentage of GDP.

Source: Eurostat

Relation with social innovation: This indicator measures the percentage of expenditure in relation to the total GDP value, targeting disability and retirement income, welfare and social services, unemployment and other transfers to persons, which are factors that are directly related with aspects to improve the welfare of individuals and the community. Thus, this indicator promotes equality and better opportunities at the societal level, acting as a supportive factor for social innovation.

Relevance to the EIS: This indicator contributes directly to business development and innovation by providing better conditions for individuals to have access to income, leading to better living conditions, and thus promoting consumption and search for employment.

Years: 2011-2018

Data availability: 94.5%

Number of countries with data available: 35 out of 37 (countries missing: Israel and Ukraine)

The figure below shows the relationship between the percentage of total public expenditure on social benefits indicator and the overall EIS 2020 SII scores.

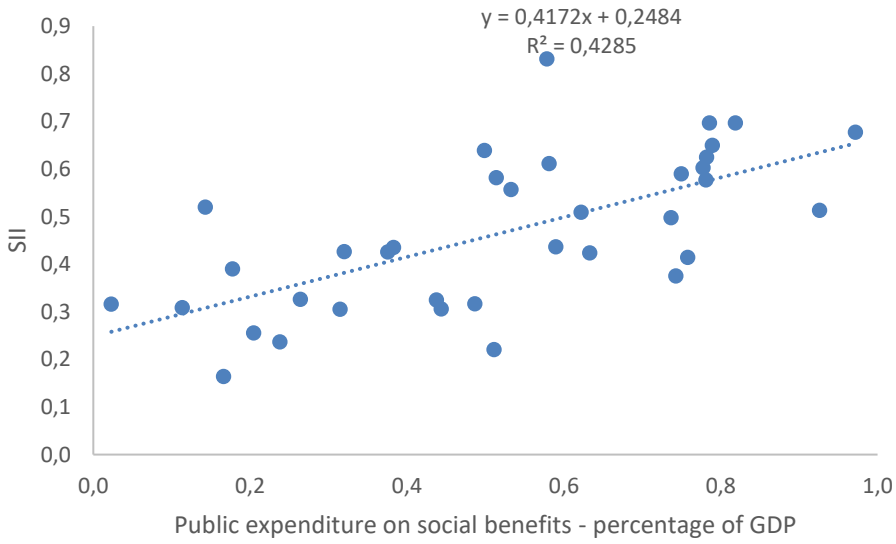


Figure 7. Correlation between the percentage of total public expenditure on social benefits indicator and the overall EIS 2020 SII scores.

The equation obtained by regressing the SII with this indicator is the following:

$$SII = 0.4172PESB + 0.2484$$

where PESB is the value of the percentage of total public expenditure on social benefits indicator. The correlation analysis shows that increasing the value of the percentage of total public expenditure on social benefits by one unit increases the overall SII score by approximately 0.4172 units.
The table below shows the SII and the ranking changes that occur with the inclusion of the percentage of total public expenditure on social benefits indicator. As shown in the table, the impact on the SII is small for most of the countries and the difference is positive (0.006) for the EU27 overall. For 17 out of the 37 countries SII is negatively affected and for 19 countries positively affected. Ireland is the country which has been most affected in terms of SII (with a negative variation of 0.017).

Table 14. Changes in EIS caused by adding the percentage of total public expenditure on social benefits indicator.

Country	EIS 2020		NEW – Public expenditure on social benefits - % of GDP				Differences	
	SII	Rank	Value	Normalised	SII	Rank	SII	Rank
CH	0.831	1	25.68	0.656	0.824	1	-0.007	0
SE	0.713	2	27.71	0.751	0.715	2	0.001	0
FI	0.709	3	29.06	0.815	0.713	3	0.004	0
DK	0.682	4	30.20	0.868	0.689	4	0.007	0
NL	0.648	5	26.28	0.684	0.649	5	0.001	0
LU	0.639	6	21.49	0.460	0.633	6	-0.006	0
BE	0.615	7	27.39	0.736	0.619	7	0.004	0
UK	0.613	8	25.43	0.644	0.614	9	0.001	-1
NO	0.611	9	26.82	0.709	0.614	8	0.004	1
DE	0.608	10	27.56	0.744	0.613	10	0.005	0
AT	0.596	11	28.33	0.780	0.602	11	0.007	0
IS	0.581	12	23.03	0.532	0.579	12	-0.002	0
IE	0.568	13	13.58	0.088	0.551	13	-0.017	0
IL	0.550	14	:	:	0.550	14	0.000	0
FR	0.530	15	31.44	0.926	0.544	15	0.014	0
EU	0.507		25.99	0.670	0.513	0	0.006	
EE	0.502	16	14.44	0.129	0.489	17	-0.013	-1
PT	0.490	17	23.20	0.540	0.492	16	0.002	1
CY	0.451	18	17.93	0.293	0.445	18	-0.006	0
ES	0.432	19	23.11	0.536	0.435	19	0.004	0
SI	0.431	20	21.69	0.469	0.432	21	0.001	-1
CZ	0.427	21	17.92	0.292	0.423	22	-0.005	-1
MT	0.426	22	15.08	0.159	0.416	23	-0.010	-1
IT	0.420	23	27.87	0.758	0.432	20	0.012	3
LT	0.404	24	15.54	0.180	0.396	24	-0.008	0
EL	0.389	25	24.34	0.593	0.396	25	0.007	0
SK	0.338	26	16.70	0.235	0.334	27	-0.004	-1
HU	0.337	27	17.42	0.268	0.334	26	-0.002	1
LV	0.320	28	15.06	0.158	0.314	29	-0.006	-1
RS	0.317	29	19.07	0.346	0.318	28	0.001	1
TR	0.316	30	13.84	0.101	0.308	30	-0.008	0
PL	0.299	31	19.18	0.351	0.300	32	0.002	-1
HR	0.298	32	21.30	0.450	0.304	31	0.005	1
MK	0.236	33	13.42	0.081	0.229	34	-0.007	-1
BG	0.230	34	16.42	0.222	0.230	33	0.000	1
ME	0.220	35	16.14	0.209	0.220	35	0.000	0
UA	0.165	36	:	:	0.165	36	0.000	0
RO	0.160	37	12.91	0.057	0.157	37	-0.004	0

Regarding the relevance of the scientific literature to the total public expenditure on social benefits, it is important to highlight that the indicator covers both societal and individual needs. Social benefits comprise many different aspects of supporting vulnerable groups, which makes the quantification of social innovation within social benefits schemes complex. Currently, the European Anti-Poverty Network (EAPN) supports initiatives in member states with innovative oriented projects. However, each organization has a different idea about innovation, rendering social innovation into a fuzzy concept (EAPN, 2016, pp. 11-14). This corroborates with the weak correlation found in total public expenditure on social benefits.

6.5 Research on SI (publications & patents)

Indicator in Chapter 5: Research on SI (publications & patents)

Indicator tested: Research publications on social innovation per million population

Dimension: Knowledge and skills

Field(s) of action: Education

Definition: Number of publications developed on social innovation per total population.

Source: EU OpenAIRE. Number of publications in EU OpeanAIRE can be identified using keywords such as social innovation or social entrepreneurship.

Relation with social innovation: It measures the number of publications regarding social innovation. Publications are a relevant indicator for research activities within a specific topic. This indicator assesses the interest from the research side concerning the topic of social innovation. Thus, having an increased number of research publications on social innovation acts as a supporting factor to the topic and for addressing social challenges in each country.

Relevance to the EIS: This indicator allows to measure research (publications) being developed on social innovation activities.

Years: 2012-2019

Data availability: 97.3%

Number of countries with data available: 36 (country missing: Israel)

The figure below shows the relationship between the research publications on social innovation per million population indicator and the overall EIS 2020 SII scores.

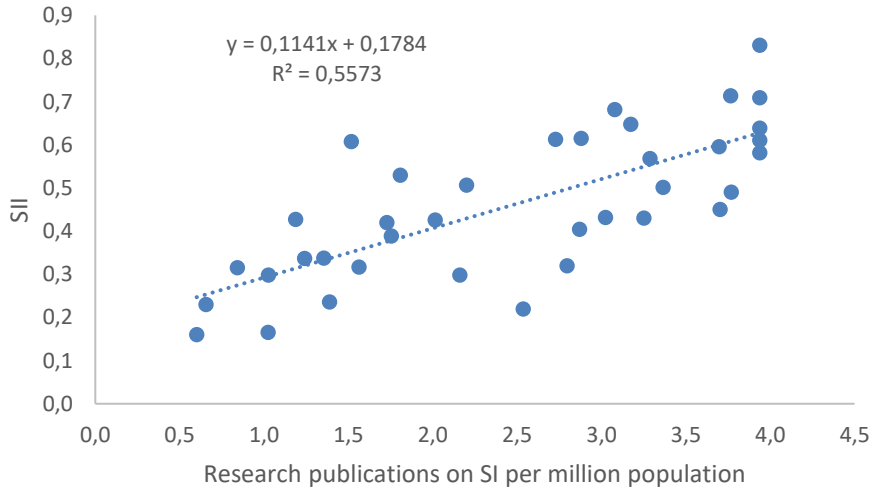


Figure 8. Correlation between the research publications on social innovation per million population indicator and the overall EIS 2020 SII scores.

The equation obtained by regressing the SII with this indicator is the following:

$$SII = 0.1141RPSI + 0.1784$$

where RPSI is the value of the research publications on social innovation per million population indicator. The correlation analysis shows that increasing the value of the research publications on social innovation per million population by one unit increases the overall SII score by approximately 0.1141 units.
The table below shows the SII and the ranking changes that occur with the inclusion of the research publications on social innovation per million population indicator. As shown in the table, the impact on the SII is small for most of the countries and the difference is positive (0.002) for the EU27 overall. For 28 out of the 37 countries SII is positively affected and for eight countries negatively affected. Iceland and Montenegro are the countries which have been most affected in terms of SII (with a positive variation of 0.018).

Table 15. Changes in EIS caused by adding the research publications on SI per million population indicator.

Country	EIS 2020		NEW – Research publications on SI				Differences	
	SII	Rank	Value	Normalised	SII	Rank	SII	Rank
CH	0.831	1	3.94	1.00	0.837	1	0.007	0
SE	0.713	2	3.76	0.96	0.722	2	0.009	0
FI	0.709	3	3.94	1.00	0.720	3	0.010	0
DK	0.682	4	3.08	0.78	0.686	4	0.004	0
NL	0.648	5	3.17	0.81	0.654	5	0.006	0
LU	0.639	6	3.94	1.00	0.652	6	0.013	0
BE	0.615	7	2.88	0.73	0.619	8	0.004	-1
UK	0.613	8	2.73	0.69	0.616	9	0.003	-1
NO	0.611	9	3.94	1.00	0.625	7	0.014	2
DE	0.608	10	1.52	0.39	0.600	11	-0.008	-1
AT	0.596	11	3.70	0.94	0.608	10	0.012	1
IS	0.581	12	3.94	1.00	0.600	12	0.018	0
IE	0.568	13	3.29	0.83	0.578	13	0.010	0
IL	0.550	14	:	:	0.550	14	0.000	0
FR	0.530	15	1.81	0.46	0.527	15	-0.003	0
EU	0.507		2.20	0.56	0.509	0	0.002	
EE	0.502	16	3.36	0.85	0.515	16	0.013	0
PT	0.490	17	3.77	0.96	0.507	17	0.017	0
CY	0.451	18	3.70	0.94	0.468	18	0.017	0
ES	0.432	19	3.02	0.77	0.444	20	0.012	-1
SI	0.431	20	3.25	0.83	0.445	19	0.014	1
CZ	0.427	21	1.19	0.30	0.423	22	-0.004	-1
MT	0.426	22	2.01	0.51	0.429	21	0.003	1
IT	0.420	23	1.73	0.44	0.421	23	0.001	0
LT	0.404	24	2.87	0.73	0.416	24	0.012	0
EL	0.389	25	1.75	0.45	0.391	25	0.002	0
SK	0.338	26	1.35	0.34	0.338	26	0.000	0
HU	0.337	27	1.24	0.31	0.336	27	-0.001	0
LV	0.320	28	2.80	0.71	0.334	28	0.014	0
RS	0.317	29	1.56	0.40	0.320	29	0.003	0
TR	0.316	30	0.84	0.21	0.312	30	-0.004	0
PL	0.299	31	1.03	0.26	0.297	32	-0.001	-1
HR	0.298	32	2.16	0.55	0.307	31	0.009	1
MK	0.236	33	1.39	0.35	0.241	33	0.005	0
BG	0.230	34	0.65	0.17	0.228	35	-0.002	-1
ME	0.220	35	2.54	0.64	0.238	34	0.018	1
UA	0.165	36	1.02	0.26	0.170	36	0.004	0
RO	0.160	37	0.60	0.15	0.160	37	0.000	0

6.6 Businesses that aim to solve social problems

Indicator in Chapter 5: Businesses that aim to solve social problems

Indicator tested: Businesses that aim to solve social problems

Dimension: Entrepreneurship

Field(s) of action: Employment

Definition: Number of people that agree/disagree with often seeing businesses that primarily aim to solve social problems.

Source: Global Entrepreneurship Monitor

Relation with social innovation: This indicator allows to understand the perception of people towards the existence of businesses that target specifically social problems. The existence of a higher number of enterprises that aim to solve social problems shows that there is a strong focus of the business community in the topic and in support social innovation.

Relevance to the EIS: Question included in GEM Survey: "In your country, you will often see businesses that primarily aim to solve social problems, agree/disagree". The data is related with the percentage of people that agree with the statement, taking into account the total number of people that agree or disagree with the question. This indicator is directly related with the existence of business solutions and initiatives that tackle social issues in a specific country, creating opportunities within the innovation ecosystem.

Years: 2019

Data availability: 72.9%

Number of countries with data available: 27 out of 37 (countries missing: Belgium, Bulgaria, Denmark, Germany, Lithuania, Malta, Austria, Montenegro, Serbia, and Turkey).

The figure below shows the relationship between the businesses that aim to solve social problems indicator and the overall EIS 2020 SII scores.

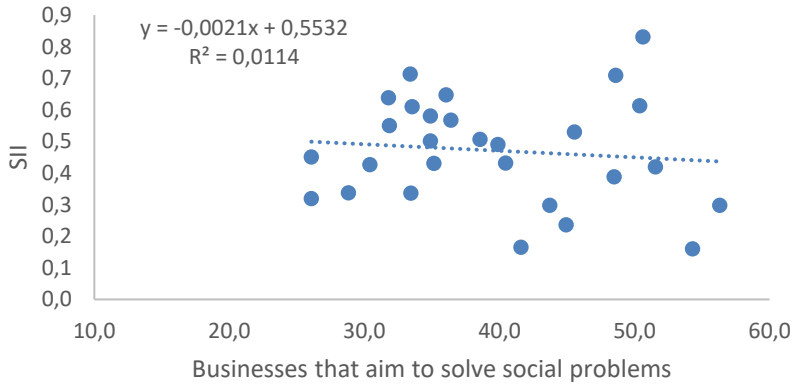


Figure 9. Correlation between the businesses that aim to solve social problems and the overall EIS 2020 SII scores.

The equation obtained by regressing the SII with this indicator is the following:

$$SII = -0.0021BSSP + 0.5532$$

where BSSP is the value of the businesses that aim to solve social problems indicator. The correlation analysis shows that increasing the value of the businesses that aim to solve social problems by one unit decreases the overall SII score by approximately 0.0021 units.

The table below shows the SII and the ranking changes that occur with the inclusion of the businesses that aim to solve social problems indicator. As shown in the table, the impact on the SII is small for most of the countries and the difference is negative (0.003) for the EU27 overall. For 11 out of the 37 countries

SII is positively affected and for 16 countries negatively affected. Romania is the country which has been most affected in terms of SII (with a positive variation of 0.028).

Table 16. Changes in EIS caused by adding the businesses that aim to solve social problems indicator.

Country	EIS 2020		NEW – Businesses that aim to solve social problems				Differences	
	SII	Rank	Value	Normalised	SII	Rank	SII	Rank
CH	0.831	1	50.61	0.81	0.830	1	-0.001	0
SE	0.713	2	33.39	0.24	0.697	3	-0.017	-1
FI	0.709	3	48.60	0.75	0.711	2	0.001	1
DK	0.682	4	:	:	0.682	4	0.000	0
NL	0.648	5	36.04	0.33	0.637	5	-0.011	0
LU	0.639	6	31.78	0.19	0.623	6	-0.016	0
BE	0.615	7	:	:	0.615	8	0.000	-1
UK	0.613	8	50.38	0.80	0.620	7	0.007	1
NO	0.611	9	33.54	0.25	0.598	10	-0.013	-1
DE	0.608	10	:	:	0.608	9	0.000	1
AT	0.596	11	:	:	0.596	11	0.000	0
IS	0.581	12	34.88	0.29	0.569	12	-0.013	0
IE	0.568	13	36.40	0.34	0.560	13	-0.008	0
IL	0.550	14	31.84	0.19	0.532	15	-0.018	-1
FR	0.530	15	45.54	0.64	0.534	14	0.004	1
EU	0.507		38.55	0.41	0.504	0	-0.003	
EE	0.502	16	34.88	0.29	0.494	16	-0.008	0
PT	0.490	17	39.89	0.46	0.489	17	-0.001	0
CY	0.451	18	26.07	0.00	0.435	19	-0.016	-1
ES	0.432	19	40.45	0.48	0.433	20	0.002	-1
SI	0.431	20	35.14	0.30	0.426	22	-0.005	-2
CZ	0.427	21	30.40	0.14	0.417	23	-0.010	-2
MT	0.426	22	:	:	0.426	21	0.000	1
IT	0.420	23	51.54	0.84	0.435	18	0.015	5
LT	0.404	24	:	:	0.404	24	0.000	0
EL	0.389	25	48.50	0.74	0.402	25	0.013	0
SK	0.338	26	28.82	0.09	0.329	27	-0.009	-1
HU	0.337	27	33.44	0.24	0.333	26	-0.003	1
LV	0.320	28	26.07	0.00	0.308	32	-0.011	-4
RS	0.317	29	:	:	0.317	29	0.000	0
TR	0.316	30	:	:	0.316	30	0.000	0
PL	0.299	31	56.30	1.00	0.324	28	0.025	3
HR	0.298	32	43.73	0.58	0.308	31	0.010	1
MK	0.236	33	44.93	0.62	0.253	33	0.017	0
BG	0.230	34	:	:	0.230	34	0.000	0
ME	0.220	35	:	:	0.220	35	0.000	0
UA	0.165	36	41.59	0.51	0.181	37	0.016	-1
RO	0.160	37	54.30	0.93	0.188	36	0.028	1

7 Conclusions and proposals for future work

The present study provides an in-depth analysis of indicators which aim to measure social innovation. The findings include: i) identification of indicators that measure social innovation - per dimension and field of action, and ii) tests of possible indicators to include in the EIS.

The process included an extensive literature review, interviews with social innovation experts, and an expert workshop organized in October 2020. The literature review and interviews with the social innovation experts emphasised that there is still no consensus around a definition of social innovation. It is clear that social innovation is used at different levels, with importance given to the line between social and business goals. Within this context, the study team adopted the Olso Manual (2018) definition of social innovation as a basis.

The team analysed seven relevant projects / articles / indexes / surveys under the topic of social innovation. This analysis led to the identification of 218 indicators aiming to measure social innovation, structured in six dimensions. In addition, a set of 5 to 10 main indicators per dimension was identified, according to a set of criteria such as periodicity of the results, type of data, geographical coverage and inclusion of the indicator in several projects / articles / indexes / surveys.

This methodology allowed to further select a total of 40 indicators considered of relevance to the topic, taking into account social innovation dimensions and fields of action. This process, together with a set of interviews with social innovation experts and feedback provided through the expert workshop organized under the project, allowed the study team to select and test six indicators which are considered possibly relevant to include in future EIS (Table 17).

Table 17. List of possible indicators to include in future EIS.

Indicator	Source	Years	Number of countries with data available
People at risk of poverty or social exclusion	Eurostat	2012-2019	35/37
Culture of volunteerism	Charities Aid Foundation	2012-2017	37/37
Presence of socially focused business support	F6S and Crunchbase	2019	26/37
Total public expenditure on social benefits	Eurostat	2011-2018	35/37
Research on SI (publications & patents)	EU OpenAIRE	2012-2019	36/37
Businesses that aim to solve social problems	Global Entrepreneurship Monitor	2019	27/37

This selection has been developed according to a set of criteria which included data availability, type of collection method and relevance to the topic of social innovation.

Although these six indicators have been selected, it is clear that none of them individually can be used to measure all the aspects of social innovation. Social innovation involves a multiplicity of actors and roles, and has an impact in several levels of innovation. This, allied with the fact that there is not yet a consensus on the definition of social innovation, creates obstacles to finding comprehensive indicators.

It is important to note that, according to the social innovation experts that participated in the workshop, at this moment it is not possible to identify a specific number of possible indicators to include in the EIS which measure different levels of social innovation. The concept is considered to be too broad, involving a different number of fields of action and dimensions. Furthermore, it is considered very challenging to compare social innovation across countries, leading to incorrect measurements and assessments. The contextual aspect is very important to better understand social innovation actions.

Within this context, the study team has developed a set of main proposals for future work for the potential inclusion of social innovation indicators into the EIS. These suggestions are as follows.

Proposal A. Inclusion of social innovation indicators in the EIS as contextual indicators

Social innovation is very different from other forms of innovation measured in the EIS. Thus, adding social innovation indicators to the EIS index is not considered to be fully able to reflect the different dimensions of the social aspects. Within this context, the study suggests that a selection of the six possible social innovation indicators identified for testing, are included in the EIS as additional contextual indicators on the impact of structural differences between countries. This would allow a better understanding of the differences between countries in the performance of indicators concerning social innovation.

Proposal B. Development of a separate measurement scoreboard for social innovation

As noted, it is not advisable for current indicators that measure social innovation to be included as part of the current EIS measurement framework. Comparing social innovation between different countries can lead to different assessments as the concept of social innovation is very broad and can differ from the EIS focus. Instead, a separate measurement tool for social innovation beyond the EIS could be adopted along the lines of a social innovation scoreboard. This tool could include an inventory of different indicators, evaluated on an annual basis, only targeting social innovation. The social innovation experts contacted through this study were in favour of this option. In terms of the indicators to include within this tool, the study team could use broader selection criteria in comparison to the one used for defining the possible indicators to include in the EIS. The study offers good level of detail on how to measure social innovation, with coherent and useful information with respect to different aspects of the concept. Further research would be required to develop a roadmap for the implementation of such a proposed new measurement tool for social innovation. This roadmap could be similar to the methodology developed in the present study, with potential testing of the indicators and building the new measurement tool.

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9 Annexes

Annex 1. Synopsis of the interview results and expert workshop

This annex provides a summary of the main aspects discussed with the social innovation experts during the interview process and the expert workshop developed on 28th October 2020.

Interviews with social innovation experts

The interviews were conducted between the 29th of June and the 14th of July 2020. In total, 10 interviews were implemented.

A document ("Interview Guide") was shared with the experts prior to the interview which contained background information on the study and an interview guide. The document included information on the concept of social innovation and the study's methodological approach, defining the concepts of fields of action and dimensions. Furthermore, it contained an indicative list of questions to be provided to the interviewee. Experts in social innovation across Europe were involved, with the aim to better understand how social innovation can be measured.

Social Innovation

1. *What are the main aspects to be considered when measuring social innovation?*

Social innovation lacks a clear and common definition. This aspect is of great importance because without a clear definition of the phenomenon it is difficult to measure it. The definition needs to be very clear on what it covers and what are the different sub-domains of social innovation. Furthermore, the experts pointed out that having a common definition of social innovation has become a challenging task, as the concept itself is related with different disciplines. Although there are several definitions proposed by different authors, there are some common elements between them. In particular, the interviewees mentioned that the Oslo Manual provides a good definition for understanding social innovation.

Multiplicity of actors and their various roles. Social innovation is a broad theme that encompasses all actors in the innovation ecosystem.

Impact of social innovation and the innovation process. The aspect of measuring the impact of social innovation in a specific project or action is key (e.g. environment, employment). In addition, it is relevant to analyse the innovation action throughout the whole process. Both these approaches should be measured – impact and process.

Ensure properly comparative data. The interviewees pointed out difficulties in finding a model that would fit into the EIS, which would measure social innovation in a country. Social innovation is a complex phenomenon – referring to social innovation is also assessing the secondary effects of certain activities. Furthermore, it is relevant to ensure that comparative data is included in this process – it is a challenge to collect data on attitudes across different countries in comparison with other data related with innovation. It is also relevant to highlight that the project team should reflect on whether or not it is important to measure social innovation every year. Thus, it is important to have datasets that allow international comparison.

2. *In your view, what are the main barriers when trying to measure social innovation? And what could be the main opportunities?*

The experts were able to identify a large set of main barriers and opportunities when trying to measure social innovation. Within this context, the following barriers are highlighted:

- Any impact that is at the level of perceptions is hard to quantify.

- There is a general lack of data around the topic of social innovation.
- There is limited granularity in the data most of times – e.g. Eurostat has certain data at the country level but it is difficult to scale it down at the city level.
- It is difficult to capture social innovation in one single measure, as it happens in a large range of sectors and areas.
- Lack of common understanding of the concept of "Social Innovation".
- New societal problems, making harder to have a common consensus and to benchmark.

Regarding the main opportunities, the following were highlighted by the experts regarding how to measure social innovation:

- Explore technological innovations, which usually have a social component.
- Look at social impacts on education and younger generations.
- Compare the EU with the rest of the world.
- Importance of generating, exploiting and disseminating knowledge.
- Have indicators that provide research in small ecosystems – interesting approach to test a diversity of indicators.
- Assess the impact investment – generate impact and then the financial return.
- More active role of decision-makers and increase the number of volunteer-based projects.

3. How could these barriers be overcome?

In terms on how to overcome the barriers identified in question 2, the interviewees were able to provide the following recommendations:

- Use novel indicators to overcome the lack of data issue.
- Measure the integration of individuals in the society.
- Have a large stakeholder panel would definitely help to build a strong measurement framework.
- Create a feedback mechanism to have a greater understanding about information data and how it works at the different levels.
- Have a clear definition of social innovation in order to better measure it – why, what, who and how.
- Regularly monitor social innovation.
- Important to have a clear conceptual framework (what to measure), but also measuring the potential benefits and outcomes.
- Map the information sources already available.

4. Who do you consider to be the key stakeholders in the process of social innovation?

The majority of the interviewees mentioned that all actors in the social innovation ecosystem have an important role and should be considered for the analysis. In particular, some key stakeholders were highlighted:

- Government / national and regional authorities;
- Financing actors;
- Academia;
- Entrepreneurs;
- Civil Society.

Any organization or individual can be part of the social innovation process. Thus, it would be important to involve a mixture of these actors in the process of measuring social innovation. Moreover, and in particular for future

activities (e.g. the experts' workshop), it would be relevant to involve pan-European international actors from different Member States.

5. *What do you consider to be the main indicators to measure social innovation? From these indicators, which ones do you consider that could be potentially included in the EIS?*

The main aspects highlighted by the interviewees regarding the indicators to measure social innovation are described below:

- Empowerment: social innovation should increase people's capacity to face their challenges. Hence, it would be very good to have an indicator on empowerment.
- ESS questions related to gender, education, demographic change (e.g. timing of life), employment, family and well-being and attitudes towards migration and inequalities could be good inspirations.
- SROI – Social Return on Investments.
- Number of projects or organisations working on social innovation (level of activity).
- Number of university courses or degrees related to social innovation.
- Civil society's attitude towards democracy, how much they trust NGOs, and if there is a culture of volunteering with or donating to these organisations.
- Measure the Input / Output / Outcome.
- How many more people can use a computer / How many new networks have been built / How far have you increased the level of trust in public authorities.
- Rate of volunteer work.
- Size of the impact investment.
- Donations provided.
- Process or product that was launched by a company that has taken into account societal or environmental aspects.
- Gender equality measures in enterprises.
- Happiness level.

Furthermore, the interviewees provided relevant inputs regarding the inclusion of potential indicators to measure social innovation in the EIS:

- The inclusion of social innovation indicators in the EIS is a learning process that should be gradually extended.
- It is difficult to include social innovation indicators in the EIS as the concept still lacks a common understanding.
- Inclusion of social indicators in the EIS should start with an initial small list of countries / indicators / fields of action – this can be gradually extended.
- Indicator that allows to measure new patents (innovating either in the process or product) related with environmental quality.
- Measure social innovation as one separate index, without mixing it with the business innovation index.

Fields of action

6. *What do you consider to be the main fields of action where social innovation occurs?*
7. *(If required) For example, do you consider the below fields of action to be relevant for social innovation? Would you suggest any additional ones?*

- *Employment – associated with empowerment and capabilities;*
- *Migration – associated with inclusion and literacy;*
- *Demographic change – including elderly people and young generations;*
- *Gender;*
- *Education;*
- *Poverty.*

In general, the interviewees agreed with the examples of fields of action provided in the interview guide. Furthermore, they agreed with the approach of identifying different fields of action where social innovation could occur. It was mentioned that in a number of cases, Social Innovation can occur in several fields of action – which is in line with the approach developed under this study.

In this context, the majority of interviewees mentioned that the following fields should be considered:

- Health;
- Environment.

Both these fields of action are very relevant to understand the social innovation phenomenon and were considered under the current study. Furthermore, some experts highlighted the following fields of action:

- Social Innovation in rural areas;
- Security issues;
- Digitalisation;
- Corruption.

Although the above-mentioned fields of action are of great importance for understanding social innovation, these were not be considered for the analysis as there is not a consensus among the experts' opinions.

Dimensions

8. *What do you consider to be the main dimensions related with social innovation indicators?*
9. *(If required) For example, do you consider the below dimensions to be relevant for social innovation? Would you suggest any additional ones?*

- *Financing;*
- *Entrepreneurship;*
- *Political and institutional framework;*
- *Civil society;*
- *Knowledge and skills;*
- *Infrastructure.*

In general, the interviewees agreed with the proposed dimensions that are relevant for social innovation. However, some interviewees highlighted that the civil society dimension can be quite broad (e.g. include policies and legal aspects), while some mentioned that this dimension fits under "target group". Some experts mentioned that other dimensions could be considered, such as collaboration, diversity and inclusion, and mobility.

10. *Which dimensions do you consider to be closer to the concept of EIS (comparative analysis of innovation performance)?*

Regarding the relation between dimensions and the concept of EIS, the interviewees pointed out that providing an indicator on social innovation to an index such as the EIS would be very challenging. Furthermore, it was highlighted that further research needs to be developed before indicators on social innovation can be included in the EIS.

Through the interviews conducted under the study, the project team identified several relevant aspects concerning how social innovation can be measured and what indicators should be used. Also, the feedback provided by the experts was relevant to confirm the definition of social innovation considered for this study (Oslo Manual), have a common understanding of the main barriers that currently exist for measuring social innovation, and how these can be overcome to identify opportunities for selecting a set of relevant indicators.

In addition, the interviews had a key role in validating the fields of action and dimensions selected within the project, allowing to identify two additional fields of action considered for the analysis – health and environment. Furthermore, the experts provided feedback on each of the fields of action and dimensions defined in this document.

It is also clear that the interviews highlighted that there is no current consensus on a specific or small set of indicators that can capture all of the various aspects of social innovation in a quantitative manner.

Social innovation expert workshop

The project team organized a social innovation expert workshop on 28th October 2020. The main objective of this workshop was to discuss the preliminary findings of the study (provided to the experts one week before the Workshop) and discuss the measurement of social innovation. The workshop was organized virtually through the Zoom platform.

The agenda for the expert workshop was as follows:

Time (CET)	Session
10:00 – 10:10	**Welcome Session** *Welcome & introduction: Presentation and objectives of the study (Project team and European Commission)*
10:10 – 10:30	**Fields of action, dimensions and Social Innovation indicators** *Presentations by project team and discussions*
10:30 – 11:20	**Views of experts on possible indicators to include in the European Innovation Scoreboard** *Experts and open discussion*
11:20 – 11:30	**Break**
11:30 – 12:15	**Possible candidate indicators to include in the European Innovation Scoreboard** *Presentations by project team and discussions*
12:15 – 12:50	**Open discussion and key takeaways**
12:50 – 13:00	**Wrap up and closing**

A total of 15 participants attended the expert workshop, including members of the EIS Study Team and the European Commission.

Name	Organization	Role
Attila Havas	Senior research fellow at the Institute of Economics, CERS	Expert
Christoph Kaletka	The Centre for Social Research (TUDO)	Expert
Judith Terstriep	Head of Research Department, Institute for Work and Technology	Expert
Karsten Frøhlich Hougaard	Director at Teknologisk Institut Denmark	Expert

Name	Organization	Role
Luis Rubalcaba	Professor of Economic Policy, Department of Economics and Business Administration, University of Alcalá	Expert
Simone Strambach	Professor, Philipps University of Marburg	Expert
Marshall Hsia	European Commission, Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs	European Commission
Tiago Pereira	European Commission, Directorate-General for Research and Innovation (RTD)	European Commission
Douglas Thompson	Sociedade Portuguesa de Inovação (SPI)	EIS Study Team
Hugo Magalhães	Sociedade Portuguesa de Inovação (SPI)	EIS Study Team
Francisco Rocha	Sociedade Portuguesa de Inovação (SPI)	EIS Study Team
Hugo Hollanders	Maastricht Economic Research institute on Innovation and Technology (MERIT)	EIS Study Team
Nordine Es-Sadki	Maastricht Economic Research institute on Innovation and Technology (MERIT)	EIS Study Team
Iris Merkelbach	Maastricht Economic Research institute on Innovation and Technology (MERIT)	EIS Study Team
Aishe Khalilova	Maastricht Economic Research institute on Innovation and Technology (MERIT)	EIS Study Team

The workshop included presentations from the experts, and the EIS Study Team. During the workshop, the experts were invited to provide inputs and comments to the work developed by the study team.

Fields of action, dimensions and Social Innovation indicators

Presentation by the EIS Study Team

- The study team developed a literature review of publications and a set of indicators was identified – 218 indicators in total;
- The study team defined and analysed the fields of action and dimensions of Social Innovation;
- A set of 5 to 10 main indicators per dimension was identified (total of 39 indicators), according to selection criteria;
- The definition (and relevance) of Social Innovation still lacks consensus. The EIS Study Team is adopting the Oslo Manual (2018) definition: "Innovations defined by their (social) objectives to improve the welfare of individuals or communities."

Discussions

- It is a good idea to adopt the definition of Oslo Manual – with a focus on an individual approach and rather than an economic one;
- It is relevant to determine the line between social goals and business goals;
- The economic objectives of Social Innovation can be misleading - entrepreneurial activity is not necessarily Social Innovation, as entrepreneurship targets company objectives;
- Criteria used to select the 39 indicators: it is relevant to understand the capacity of an indicator to provide information on what is innovation and what is social. Not all 39 indicators have the same level of relevance to both aspects;
- Some of the selected indicators do not measure Social Innovation sufficiently, rather "only" innovation;
- It would be beneficial for the study team to provide a better understanding of what each indicator is measuring;

- It is necessary to include a focus on indicators that can describe the impact of Social Innovation activities. A baseline is required from which to measure this impact;
- It is interesting to extend from existing list of 39 indicators to broaden the discussion – possibly in future work;
- Fields of action: it is important to include fields for marginalization and environmental challenges;
- The 39 indicators are not all sufficiently relevant to Social Innovation or can be said to provide a background picture. Some of the 39 indicators are highly relevant – including "number of projects/initiatives of Social Innovation". The indicator "Public expenditure on social benefits" could indicate the need for Social Innovation;
- "Total public expenditure" is a very broad indicator covering elderly, unemployed, NEETs etc. – it would be useful to refine the indicator to focus on social benefits.

<u>Views of Social Innovation experts on possible indicators to include in the European Innovation Scoreboard</u>

Presentation by Experts

- Experts were invited to present and discuss the following aspects:
  - *From the indicators proposed within the study (39 indicators in total), which indicators best measure the Social Innovation phenomena, and thus could be considered for the EIS?*
  - *What other indicators would you propose to include in the EIS?*

Discussions

- It is relevant to clarify the context of Social Innovation. For instance, at the national level, the context can be defined in terms of policies, capacity building, funding activities and legislation;
- The measurement of social problems is a factor in the analysis of the impact of Social Innovation activities;
- Regional and detailed pilot projects should be implemented before including any Social Innovation indicators in the EIS. This is especially relevant for measuring the impact of Social Innovation;
- In a presentation from one of the experts, the following was highlighted:
  - Relevant indicators from the current list:
    - Civil society: social cohesion, positive attitudes, culture of volunteerism, civil society engagement - these indicators measure Social Innovation capacity;
    - Entrepreneurship: risk taking mindset; citizen's attitudes towards entrepreneurship; knowledge, skills & experience to start a new business; presence of socially focused business support;
    - Financing: all indicators are relevant. However, there is an issue as they do not allow conclusions on whether they are actually used for Social Innovation;
    - Infrastructure: all indicators are relevant;
    - Knowledge & skills: access to business, human resources, legal, marketing, design and media support; digital inclusion; research on SI; patents in environment-related technologies;
    - Political & institutional framework: all indicators are relevant.
  - Other potentially relevant indicators:
    - Civil society: attitudes towards social inequality and equal opportunities;
    - Entrepreneurship: entrepreneurs are only one group of relevant actors – other organisations engaging in Social innovation include welfare organizations, associations, not-for-profit organizations;
    - Financing: number of charitable banks; annual social transfers;
    - Infrastructure: spaces for experimentation, i.e. number of Social Innovation hubs;
    - Political & institutional framework: inter-ministerial cooperation.
- In a presentation from one of the experts, the following was highlighted:

  - Relevant indicators from the current list:
    - Civil society: civil society engagement;
    - Entrepreneurship: social entrepreneurship (business for social problems);
    - Financing: public spending on social benefits;
    - Infrastructure: openness of data;
    - Knowledge and skills: digital inclusion in skills and population;
    - Political: national policy for Social Innovation;
    - Others (interview): social return of investments.
  - Other potentially relevant indicators:
    - Civil society: third sector role (NGOs, foundations, others); employment, number of companies, value added;
    - Entrepreneurship: innovation networks and platforms formed by public-private-third sector users;
    - Financing: collaborative R&D and innovation expenditure;
    - Knowledge and skills: non-cognitive skills;
    - Political: new innovation policies indicators.
- It was noted that Social innovation activities can differ across "fields" – even in a given region or country. Thus, the context of the specific region or country is important. There are fundamental differences across the EU in this regard;
- It is important that the project should not attempt to construct a composite indicator of Social innovation, nor develop scoreboard of countries for Social Innovation.

<u>Possible candidate indicators to include in the European Innovation Scoreboard</u>

Presentation by the EIS Study Team

- The study has tested 13 indicators, that were selected from the 39 indicators through the implementation of further criteria;
- The methodology for testing these indicators is the same employed in the EIS previously, and includes identifying and replacing outliers, setting reference years, imputing for missing values, determining maximum and minimum scores (using data for an eight-year period), transforming data that have highly skewed distributions across countries, calculating re-scaled scores and calculating composite innovation indexes;
- For a total of 4 selected indicators, a detailed description was presented, including: indicator tested, dimension, field(s) of action, definition, source, relation with Social Innovation, relevance to the EIS and an assessment of the ease of getting the data.

Discussions

- It was highlighted that measuring Social Innovation is a very difficult mission – especially at our current level of understanding and consensus of the concept and what is Social innovation;
- The experts perceived that a selection of 13 indicators were relevant to measure Social Innovation. They show the difficulty in how to turn conceptual ideas on what is Social innovation to indicators with quantifiable measurements of impact or activities;
- The following indicators were identified as only partially relevant: Immigration, Starting a business, Total expenditure on education, Employment, Knowledge skill and experience, Cost to start a business, and Business demography. It was noted that these do not focus only on Social Innovation;
- It was also noted that the indicator of Employment can give good background, but is not specific in Social Innovation. This issue is the same for the Starting a business indicator, which does not focus on businesses that aim to solve societal problems;
- It was noted to be useful to distinguish between the presence of supportive factors for Social Innovation (relevant actors, capital, skills, research, legal framework) and the development of

social challenges that Social Innovation should address (number of homeless people, percentage of people feeling lonely, number of drug abusers, lack of jobs for vulnerable groups, number of people in NEETs - Not in Education, Employment, or Training, number of former inmates re-socialized);

- There is an importance in distinguishing between an indicator that measures the need for Social innovation (e.g. poverty), broader context barriers (e.g. welfare system) and Social Innovation readiness (e.g. support infrastructures, access to finance);
- Vulnerable groups, number of jobs created for social groups, and labour market integration were also identified as relevant indicators;
- One expert mentioned that it would be relevant to further elaborate on the criteria on "relevance to Social Innovation". The expert mentioned that immigration is a good indicator, but maybe need to further elaborate, be more specific on certain aspects (e.g. immigrants that are receiving social support, social actions);
- Further areas of indicators were identified as of interest – including Urban/Regional Indicators, environmental aspects and the green economy;
- One expert also noted that there is a need to have information at the national level and to trace the collaborative way that innovation is being implemented – this is not measured in normal R&DI statistics. It is relevant to check the Global Innovation Index – with a focus on industry-university integration;
- The difference between micro and macro levels of Social Innovation were noted. Social Innovation activities take place at the micro level – by various organization and individual types – and also at the macro level. This further increases the complexity of measurement, and also furthers the difficulties to compare across countries;
- Further final ideas from the discussion include the following:
    - Indicators should describe the contextual setting. It is not enough to only focus on quantitative measures, as interpretation of the indicators is needed;
    - The complexity of the concept of Social Innovation (which includes different fields and actions and dimensions) is not measurable through the EIS;
    - Social Innovation has a strong emphasis on developing new solutions and scaling;
    - A separate EIS or other annual analysis only targeting Social Innovation could be developed.

Annex 2. List of individual indicators from the literature review

Table 18 to Table 24 provide the specific individual indicators from the literature.

Table 18. The European Digital Social Innovation Index (EDSII).

Dimension	Indicator	Source[10]	Number of countries covered	Periodicity [11]	Fields of Action	Definition[12]
Funding	Availability of seed grant funding	Survey carried out by Nesta for the EDSII	17 (EU-27 and the UK)	2019	Employment	Response to survey question asking the extent to which respondents agree or disagree that it is relatively easy for a promising DSI initiative to access grant funding in the first years of operation (anywhere up to around 200,000 €)
	Availability of major grant funding	European Commission Structural & Investment Funds Data (Link)	23 (EU-27 and the UK)	Unclear, collected in 2018 in the EDSI	Employment	Percentage of total EU structural funds going to ICT projects (grants of more than 200,000 €)
	Flexibility / ability of grant funding to support DSI	Survey carried out by Nesta for the EDSII	17 (EU-27 and the UK)	2019	Employment	Response to survey question asking the extent to which respondents agree or disagree that funding available through grants, loans, equity and other mechanisms tends to be open and accessible to small organisations and collaborative projects and allows for flexible product and service design.
	Availability of impact investment	F6S (Link) Crunchbase (Link) Impactspace (Link)	26 (EU-27 and the UK)	Unclear, collected in 2018 in the EDSI	Employment	Number of organisations working in the impact investment sector (per capita; includes impact funds, angels' networks, banks and corporates that make impact investments, investment fund managers and other capital channels & intermediaries)
	Willingness of public and social sector to procure from startups	European Commission Tenders Electronic Daily (TED) (Link)	26 (EU-27 and the UK)	Updated daily	Employment	Proportion of money spent by local or regional authority contractors that is going to SMEs

[10] Some sources included are too vague and not defined in detail.
[11] For the EDSI, the periodicity refers to the frequency to which the data is collected and since when. For the open and big data sources, it is sometimes unclear since when the data is collected and to which frequency it is updated.
[12] For the EDSI, the definition refers to "what is measured".

Dimension	Indicator	Source[10]	Number of countries covered	Periodicity [11]	Fields of Action	Definition[12]
Skills	Access to business, HR, legal, marketing, design and media support	Eurostat (Link)	26 (EU-27 and the UK)	Annual 2008-2018	Employment	Number of employees working in advertising and market research activities (per active population [age 15 - 64]).
	Access to employees with data skills	Eurostat (Link)	26 (EU-27 and the UK)	Annual 2008-2018	Employment	Number of employees working in legal and accounting activities; activities of head offices; management consultancy activities (per active population [age 15 - 64])
		Eurostat (Link)	26 (EU-27 and the UK)	Annual 2008-2018	Employment, Demographic Change	Number of employees working in financial and insurance activities (per active population [age 15 - 64])
		Eurostat (Link)	26 (EU-27 and the UK)	Annual 2008-2018	Employment, Demographic Change	Number of employees working in administrative and support service activities (per active population [age 15 - 64])
		Eurostat (Link)	26 (EU-27 and the UK)	Annual 2008-2018	Employment, Demographic Change	Number of employees working in employment activities (per active population [age 15 - 64])
		Stack exchange API (Link)	26 (EU-27 and the UK)	Unclear, collected in 2018 in the EDSI	Demographic Change	Number of users on data science stack exchange forum from city (per active population [age 15 - 64])
	Access to employees with service design skills	servicedesignmap .com	26 (EU-27 and the UK)	2017 – now	Employment, Education	Number of service design higher education programmes, practitioners and researchers located in city (per active population [age 16 - 64])
	Access to employees with software engineering/ development skills	Stack exchange API (Link)	26 (EU-27 and the UK)	Unclear, collected in 2018 in the EDSI	Employment, Education	Number of users on the Stackoverflow (for programmers) forum from city (per active population [age 16 - 64]).
	Presence of universities with expertise in DSI	Microsoft academic graph API (Link)	26 (EU-27 and the UK)	Unclear, updated weekly	Education	Number of universities with academics publishing papers with titles or abstracts including DSI related keywords
Civil Society	Access to volunteers	European Community Household Panel (ECHP) (Link)	26 (EU-27 and the UK)	Unclear, collected in 2015 in the EDSI	Demographic Change, Employment	Percentage of population (16 years +) that participate in formal volunteering activities.
	Positive attitudes to civil society	Flash Eurobarometer 373 (Link)	25 (EU-27 and the UK)	Ad hoc, 2013	Other	Percentage of survey respondents that reported to agree or strongly agree that they share the values or interests of NGOs in their region and trust them to act in the right way to influence political decision making

Dimension	Indicator	Source[10]	Number of countries covered	Periodicity [11]	Fields of Action	Definition[12]
	Social cohesion	OECD Regional Wellbeing Index (Link)	26 (EU-27 and the UK)	Annual 2000-2017	Other	Quality of support network measured by percentage answering "Yes" to survey question asking "if you were in trouble, do you have relatives or friends you can count on to help you whenever you need them or not?"
		Eurobarometer 83.3 (Link)	20 (EU-27 and the UK)	Twice per year 1974-2019	Other	Identity measured by percentage of respondents that answered 'Fairly attached', 'Very attached' to question asking how attached they feel to their city.
		Eurobarometer 81.5 (Link)	26 (EU-27 and the UK)	Annual 2000-2017	Other	Civic engagement measured by voter turnout at last national election.
		Eurobarometer 81.5 (Link)	20 (EU-27 and the UK)	Twice per year 1974-2019	Other	Trust in people measured by average score given by respondents who were asked to score on a scale of 1-10 how much people can be trusted or not (where '1' means that "most people cannot be trusted" and '10' means that "most people can be trusted).
	Individual giving	CAF - World Giving Index	26 (EU-27 and the UK)	Annual 2010-2017	Other	Score from indicator on donating money to charity. This indicator was based on responses to the survey question: "Did you donate money to charity last 12 months (yes/no)"
	Public advocacy for DSI	Survey carried out by Nesta for the EDSII	17 (EU-27 and the UK)	2019	Other	Response to survey question asking the extent to which respondents agree or disagree that DSI and related fields (i.e. civic tech, gov tech etc.) are regularly spoken about by politicians, public figures and in the media.
	Presence of supportive government policy for social purpose initiatives	Survey carried out by Nesta for the EDSII	17 (EU-27 and the UK)	2019	Other	Response to survey question asking the extent to which respondents agree or disagree that government policies are supportive of social purpose initiatives, social innovation and social enterprise through policies such as specific legal forms, tax relief and fiscal incentives or financing mechanisms.
Collaboration	Events where people can meet to network and discuss DSI	Meetup API / Eventbrite API (Link)	26 (EU-27 and the UK)	Unclear, collected in 2018 in the EDSI	Other	Number of events with focus on DSI on meetups.com and eventbrite.com (per capita).
	Online collaboration	GitHub API (Link)	26 (EU-27 and the UK)	Unclear, collected in 2018 in the EDSI	Other	Number of GitHub users with projects containing DSI related keywords in their descriptions based in city (per capita).

Dimension	Indicator	Source[10]	Number of countries covered	Periodicity [11]	Fields of Action	Definition[12]
	Government collaboration with civil society	V-Dem (Link)	26 (EU-27 and the UK)	2009-2018	Other	Aggregated score given by panel of experts to question: "Are major civil society organizations (CSOs) routinely consulted by policymakers on policies relevant to their members?" 0 = No, 1 = To some degree, 3 = Yes.
	Government collaboration with tech sector	European Commission (PREDICT) (Link)	26 (EU-27 and the UK)	Annual, 2012-2019	Other	Proportion of GDP spent on Government R&D for ICT
		UN EGovernment Survey (Link)	26 (EU-27 and the UK)	Every 2 years 2001-2020	Other	Score for Online Service Component of e-government development index
		Survey carried out by Nesta for the EDSII	17 (EU-27 and the UK)	2019	Other	Response to survey question asking the extent to which respondents agree or disagree that local and national government support, work with and procure from the technology sector (particularly start-ups and SMEs) to collaboratively improve public services and address governmental priority areas.
	Civil society collaboration with tech sector	Survey carried out by Nesta for the EDSII	17 (EU-27 and the UK)	2019	Other	Response to survey question asking the extent to which respondents agree or disagree that civil society organisations (charities, NGOs and volunteer-based organisations) and the tech sector work collaboratively on DSI, for example through funding, collaborative projects, subsidised service provision and events.
	Engagement with DSI	Twitter API (Link)	26 (EU-27 and the UK)	2006 – now	Other	Number of tweets which include DSI related hashtags / keywords from users located in each city (per estimated number of users in city)
Infrastructure	Access to affordable and fast broadband and mobile internet	Speedtest by Ookla (Link)	26 (EU-27 and the UK)	2016 – now	Other	Average mobile download speed (over 9-month period)
		Speedtest by Ookla (Link)	26 (EU-27 and the UK)	2016 – now	Other	Average mobile upload speed (over 9-month period)
		Speedtest by Ookla (Link)	26 (EU-27 and the UK)	2016 – now	Other	Average mobile latency (over 9-month period)
		Speedtest by Ookla (Link)	26 (EU-27 and the UK)	2016 – now	Other	Average broadband download speed (over 9-month period)
		Speedtest by Ookla (Link)	26 (EU-27 and the UK)	2016 – now	Other	Average broadband upload speed (over 9-month period)
		Speedtest by Ookla (Link)	26 (EU-27 and the UK)	2016 – now	Other	Average broadband latency (over 9-month period)
	Access to flexible workspace	coworker.com (Link)	26 (EU-27 and the UK)	2015 – now	Employment	Number of coworking spaces (per capita)

Dimension	Indicator	Source[10]	Number of countries covered	Periodicity [11]	Fields of Action	Definition[12]
	Access to fabrication and manufacturing facilities	diybio.org (Link) fablabs.io (Link) hackerspaces.org (Link)	26 (EU-27 and the UK)	Unclear, collected since 2008/2014/2006	Employment	Number of Fablabs, DIYBio labs and Hackerspaces.
	Presence of socially focused business support	F6S (Link) Crunchbase (Link) Impactspace (Link)	26 (EU-27 and the UK)	Unclear	Employment, Health, Environment	Number of socially focused accelerators and incubators.
	Openness of data	Global Open Data Index (Link)	25 (EU-27 and the UK)	Annual 2013-2017	Other	Score from the Global Open Data index, an index measuring how governments are publishing and using open data for accountability, innovation and social impact. The index is made up of themes covering readiness, implementation and emerging impact.
		Open Data barometer (Link)	22 (EU-27 and the UK)	Annual 2013-2017	Other	Score from Open Data Barometer, an index measuring the openness of government data in the following categories: Budget, Spending, Procurement, Election results, Company register, Land ownership, National maps, Administrative Boundaries, Locations, National statistics, Draft legislation, National law, Air quality and Water quality
	Ease of starting a business	The World Bank - Ease of doing business index (Link)	26 (EU-27 and the UK)	2019	Employment	Score from Starting a business sub - dimension of the Ease of doing business index.
Diversity and Inclusion	Diversity within the tech sector	Crunchbase (Link)	26 (EU-27 and the UK)	Unclear, collected in 2018 in the EDSI	Gender	Percentage of founders of tech firms that are female.
		Crunchbase (Link)	26 (EU-27 and the UK)	Unclear, collected in 2018 in the EDSI	Education	Percentage of founders of tech firms that do not hold a degree minus percentage of regions population that do not hold a degree (tertiary education).
	Diversity within civil society	V-Dem (Link)	26 (EU-27 and the UK)	2009-2018	Gender	Aggregated score given by panel of experts to question: "Are women prevented from participating in civil society organizations (CSOs)? 0: Almost always. 1: Frequently. 2: About half the time. 3: Rarely. 4: Almost never"
		Survey carried out by Nesta for the EDSII	17 (EU-27 and the UK)	2019	Gender	Response to survey question asking the extent to which respondents agree or disagree that its civil society sector

Dimension	Indicator	Source[10]	Number of countries covered	Periodicity [11]	Fields of Action	Definition[12]
						is diverse and inclusive in terms of gender, age, ethnicity, sexual orientation and ability.
	Inclusiveness of innovation	Flash Eurobarometer 354 (Link)	26 (EU-27 and the UK)	Ad hoc, 2012	Education	Percentage of respondents having participated in any course or activity relating to entrepreneurship at school.
	Digital inclusion and skills in population	DESI (Link)	26 (EU-27 and the UK)	Annual, 2014-2019	Employment, Education	Score for basic skills and usage Sub dimension of human capital dimension of DESI index.

Table 19. Social Innovation Index (EIU).

Dimension	Indicator	Source	Number of countries covered[13]	Periodicity[14]	Fields of Action	Definition
Policy and Institutional Framework	Existence of national policy on social innovation	EIU analysis	45	2015	All	The existence of a government-led national policy to encourage social innovation. 2=A government strategy on promoting social innovation or entrepreneurship exists. 0=No such strategy exists.
	Social innovation research and impact	EIU analysis	45	2015	All	The existence of government-led data collection and policy needs to support social innovation. 3=The government regularly collects information on social enterprises and social entrepreneurs with data made public. 0=No such research exists.
	Legal framework for social enterprises	EIU analysis	45	2015	All	The existence of specific regulatory frameworks for social enterprises, social entrepreneurs and other social innovation businesses. 2=Legal frameworks exist and widely used. 0=No such frameworks exist.
	Effectiveness of system in policy implementation	EIU Business Environment Ratings	45	2015	All	The effectiveness of policy implementation and execution rating scores countries. 5=very high. 1=very low.
	Rule of law	EIU Business Environment Ratings	45	2015	Other	Transparency and fairness of legal system. 5=very high/fair. 1=very low/unfair.
Financing	Availability of government financing to promote social innovation	EIU analysis	45	2015	Other	The availability and ease of use of financing mechanisms such as social innovation funds, government grants, social impact bonds and business incubators. 7=All mechanisms available and easy to access. 0=None exist.
	Ease of getting credit	World Bank	45	2015	Other	Measures the degree to which collateral and bankruptcy laws protect the rights of borrowers and lenders and thus facilitate lending. 12=very high. 0=non-existent
	Total public social expenditure	International Labour Organisation	45	2013, 2015	Other	Government social expenditure in the form of cash benefits, direct in-kind provision of goods and services, and tax breaks with social purposes as a percentage of country's GDP.

[13] This index covers 45 developed and in development countries around the globe
[14] Periodicity in the Social Innovation Index refers to the year the EIU analysis took place.

Dimension	Indicator	Source	Number of countries covered[13]	Periodicity[14]	Fields of Action	Definition
Entrepreneurship	Risk-taking mindset	Global Entrepreneurship Monitor	45	2015-2019	Employment, Demographic Change	Population aged 18-64 with positive perceived opportunities who indicate that fear of failure would prevent them from setting up a business.
	Citizen's attitude towards entrepreneurship	Global Entrepreneurship Monitor	45	2015-2019	Employment, Demographic Change	Population aged 18-64 who agree with the statement that in their country, most people consider starting a business as a desirable career choice.
	Ease of starting a business	EIU Business Environment Ratings	45	2015	Employment	Levels of regulation involved in setting up new private businesses. 5=very high. 1=very low.
	Development of clusters	World Economic Forum	45	2015	Employment	The extent to which there are well-developed and deep clusters (geographic concentrations of firms, suppliers, producers of related products and services, and specialised institutions in a particular field). 7=widespread in many fields. 1=non-existent.
Society	Culture of volunteerism	Charities Aid Foundation	45	2015	Education	Measures the average percentage of people in each country who donate money, volunteer or help a stranger.
	Political participation	EIU Business Environment Ratings	45	2015	Education	Willingness of citizens to participate in public debate, elect representatives and join political parties. 10=high participation. 0=lowest participation.
	Civil society engagement	World Values Survey, European Social Survey	45	2014, 2016, 2018	Education	Proportion of respondents who are members (active or inactive) of a humanitarian or charitable organization.
	Trust in society	World Values Survey, European Social Survey, Latinobarómetro, Global Barometer Study	45	2014, 2015, 2016, 2017, 2018	Other	Proportion of respondents who answered "most people can be trusted".
	Press freedom	Reporters Without Borders	45	2016	Other	Level of freedom available to journalists based on results of World Press Freedom Index. 100=best, 0=worst.

Table 20. A Regional Index to Measure Social Innovation.

Dimension	Indicator	Source	Number of countries covered[15]	Periodicity[16]	Fields of Action	Definition
Potential capacity	Knowledge Capacity – Supply of Knowledge-generating investigators within the organisation	Primary research (survey developed under the study)	1 (Basque Country – Spain)	2013	Employment	Proportion (30%) of contracted personnel dedicated to research activities
	Learning Capacity – Development of competency training activities	Primary research (survey developed under the study)	1 (Basque Country – Spain)	2013	Education	Degree of achievement in competency training at an organisational level
	Capacity for Socialisation (internal) – Existence of internal mechanisms for the exchange of ideas, information, knowledge	Primary research (survey developed under the study)	1 (Basque Country – Spain)	2013	Other	Degree of implantation of regular mechanisms for the exchange of ideas, knowledge and relevant information for the organisation's activities
	Capacity for Association (external) – Development of activities to form links with external agents (networking, cooperation and strategic alliances)	Primary research (survey developed under the study)	1 (Basque Country – Spain)	2013	Other	Intensity of association with external agents for the exchange of information and knowledge
	Development Capacity – Application of new ideas, prototypes and activities resulting from the generation of new ideas	Primary research (survey developed under the study)	1 (Basque Country – Spain)	2013	Other	Degree of intensity in developing projects / prototypes applied by the organisation

[15] The RESINDEX was adopted in the Basque Country, Spain, as a pilot research project.
[16] Periodicity in the RESINDEX refers to the year the survey was developed.

Dimension	Indicator	Source	Number of countries covered[15]	Periodicity[16]	Fields of Action	Definition
Realized Capacity	Access to knowledge for social projects (innovative and non-innovative) – Monitoring of social matters	Primary research (survey developed under the study)	1 (Basque Country – Spain)	2013	Other	Existence of individuals or units intended to identify needs / social demands (0 or 1)
	Access to knowledge for social projects (innovative and non-innovative) – Diversity in the sources of ideas for the development of social projects	Primary research (survey developed under the study)	1 (Basque Country – Spain)	2013	Other	Degree of diversity (0 - 100%) of the sources of ideas for social projects
	Access to knowledge for social projects (innovative and non-innovative) – Diversity in cooperating partners for the development of social projects	Primary research (survey developed under the study)	1 (Basque Country – Spain)	2013	Other	Degree of diversity (0-100%) in cooperating partners for the development of social projects
	Development of projects (innovative and non-innovative) – Diversity in the sources of financing (capital resources, public and private funds) for the development of social projects	Primary research (survey developed under the study)	1 (Basque Country – Spain)	2013	Other	Degree of diversity (0-100%) in the sources of financing for the development of social projects
	Development of projects (innovative and non-innovative) – Diversity in the types of evaluation of social projects	Primary research (survey developed under the study)	1 (Basque Country – Spain)	2013	Other	Degree of diversity (0-100%) in the types of evaluation for the development of social projects
	Development of projects (innovative and non-innovative) – Diversity in the manner of social	Primary research (survey developed	1 (Basque Country – Spain)	2013	Environment	Degree of diversity (0-100%) in the manner of social intervention for the development of social projects

Dimension	Indicator	Source	Number of countries covered[15]	Periodicity[16]	Fields of Action	Definition
	intervention (technological, cultural, etc.) in social projects	under the study)				
	Impact of social projects (innovative and non-innovative) – Degree of diversity in the social impact of social projects (different audiences)	Primary research (survey developed under the study)	1 (Basque Country – Spain)	2013	Environment	Degree of diversity (0-100%) in social dissemination of social project outcomes
	Impact of social projects (innovative and non-innovative) – Degree of diversity in the organisational impact of social projects	Primary research (survey developed under the study)	1 (Basque Country – Spain)	2013	Environment	Degree of diversity (0-100%) in the improvement within organisations as a result of carrying out social projects
	Impact of social projects (innovative and non-innovative) – Degree of diversity in the impact of social projects within a sector (health, education, environment, social services)	Primary research (survey developed under the study)	1 (Basque Country – Spain)	2013	Health, Education, Environment	Degree of diversity (0-100%) in the sectors impacted by social projects
	Governance of Social Projects (innovative and non-innovative) – Degree of social governance (levels of target population's involvement in social projects)	Primary research (survey developed under the study)	1 (Basque Country – Spain)	2013	Other	Degree of participation (0-100%) of the target population in the project
	Governance of Social Projects (innovative and non-innovative) – Degree of organisational governance (diversity	Primary research (survey developed under the study)	1 (Basque Country – Spain)	2013	Other	Degree of diversity (0-100%) in the types of cooperating partners in social projects

Dimension	Indicator	Source	Number of countries covered[15]	Periodicity[16]	Fields of Action	Definition
	of cooperating partners in social projects)					
	Governance of Social Projects (innovative and non-innovative) – Degree of sustainability of social projects	Primary research (survey developed under the study)	1 (Basque Country – Spain)	2013	Environment	Degree of sustainability (0-100%) of the projects

Table 21. Improved Measurement of the Economics of Social Innovation (SIMPACT Project).

Dimension	Indicator[17]	Source[18]	Number of countries covered	Periodicity	Fields of Action	Definition[19]
Labour	Employment by sex, age and economic activity	Eurostat table lfsq_egan2	35 (Europe + Turkey)	2008-2019	Employment, Health	Number of workers in human health and social activities (NACE R2, Q)
	Voluntary work	European Values Survey Variable A081	47 (Europe – for 2008)	1981, 1990, 1999, 2008	Employment, Health	Unpaid work social welfare service
	Unemployment rates by sex, age and citizenship	Eurostat table lfsq_urgan	35 (Europe + Turkey)	2017-2019	Employment, Gender, Demographic change	Long-term unemployment rates by sex, age and citizenship
	Inactive population not seeking employment by sex, age and willingness to work	Eurostat table lfsq_igaww	35 (Europe + Turkey)	2008-2019	Employment, Gender, Demographic change	Inactive population by sex, age and willingness to work
	Job satisfaction	European Values Survey Variable C033	47 (Europe – for 2008)	1981, 1990, 1999, 2008	Employment	How satisfied are you with your job [1 to 10]
Financial Capital	GDP value	World Bank WDI Tables	99	1970-2017	Other	GDP at market prices
		World Bank WDI Tables	99	1970-2017	Other	Government expenses – providing goods and services (% of GDP)
	Total expenditure on social benefits	Eurostat table tps00102	27 (Europe)	2006-2017	Health, Poverty	% Total expenditure on social protection
	Innovation in high-tech sectors	Eurostat table htec_cis6	32 (Europe + Turkey)	2008, 2010, 2012	Employment	Innovative enterprises that receive public funding as a % of total
	Business demography	Eurostat table tin00170	28 (EU-27 and the UK)	2008-2017	Employment	Number of start-ups: Business demographics main variables
	Expenditure of charities and foundations	DAFNE Donors and Foundations Network Europe	28 (EU-27 and the UK)	2015-2018	Other	Total expenditure (in €) of charities and foundations
	Starting a Business	World Bank Doing Business Data	193	2019	Employment	Number of procedures, time, cost and paid-in minimum capital requirement for a small- to medium-size limited

[17] The indicator distinguishes between SI Potential (supply) and Needs (demand) for both tangible (physical/monetary) and intangible (non-physical, non-monetary) indicators.
[18] Some sources are not available.
[19] The definition in the SIMPACT Project refers to the indicator metrics.

Dimension	Indicator[17]	Source[18]	Number of countries covered	Periodicity	Fields of Action	Definition[19]
						liability company to start up and formally operate in each economy's largest business city
	Central government dept, total	World Bank WDI Tables	99	1970-2017	All	Total central government debt as % of GDP
	Business demography main variables – Enterprise death rates	Eurostat table tin00170	28 (EU-27 and the UK)	2008-2017	Employment	Number of enterprise death rates
	People at risk of poverty or social exclusion	Eurostat table tipslc10	28 (EU-27 and the UK)	2008-2019	Poverty	This indicator corresponds to the sum of persons who are: at risk of poverty or severely materially deprived or living in households with very low work intensity.
	Housing cost overburden rate by age group	Eurostat table tessi161	36 (Europe + Turkey)	2008-2019	Poverty	This indicator is defined as the percentage of the population living in a household where the total housing costs (net of housing allowances) represent more than 40% of the total disposable household income (net of housing allowances) presented by age groups.
	Claiming state benefits	European Values Survey Variable F114	47 (Europe – for 2008)	1981, 1990, 1999, 2008	Poverty	Claiming state benefits which you are not entitled to
Public Capital	Infrastructure Investment	OECD doi:10.1787/b06ce3ad-en	48 (Worldwide)	2014-2018	Other	Spending on new transport construction and the improvement of the existing network (Road / Rail / Air, Euro)
	Level of internet access – house holds	Eurostat table tin00134	34 (Europe + Turkey)	2008-2019	Demographic Change, Poverty	Percentage of households who have internet access at home. All forms of internet use are included. The population considered is aged 16 to 74
	Government Expense – providing goods and services	World Bank WDI Tables	34 (Europe + Turkey)	2008-2019	Poverty	Expense is cash payments for operating activities of the government in providing goods and services. It includes compensation of employees (such as wages and salaries), interest and subsidies, grants, social benefits, and other expenses such as rent and dividends.
	Mode of transport – Typically most often uses	Eurobarometer 82.2 (Oct 2014) Variable qa1	28 (EU-27 and the UK)	2013	Poverty	Respondents were asked what kind of transport they used most often on a typical day
	Quality of Government	European Quality of Government Index (EQI)	28 (EU-27 and the UK)	2010, 2013, 2017	Other	Perceptions and experiences with public sector corruption, along with the extent to which citizens believe various public sector services are impartially allocated and of good quality.
	Modal split of passenger transport	Eurostat table tran_hv_psmod	32 (Europe + Turkey)	2008-2017	Other	Modal split of passenger transport (%)

Dimension	Indicator[17]	Source[18]	Number of countries covered	Periodicity	Fields of Action	Definition[19]
	Internet subscription – main factor	Eurobarometer 81.1 (Jan 2014) Variable qb7a	28 (EU-27 and the UK)	2013	Other	When subscribing to an Internet connection what are the main factors you consider
	Mode of transport reason: No alternative	Eurobarometer 82.2 (Oct 2014) Variable qa2.7	28 (EU-27 and the UK)	2013	Poverty	Mode of transport reason: No alternative (numeric)
Knowledge Capital	Public expenditure on education	Eurostat table educ_uoe_fine06	30 (Europe + Turkey	2012-2016	Education	Public expenditure on education by education level and programme orientation - as % of GDP
	Employment by sex, occupation and educational attainment level	Eurostat table lfsa_egised	36 (Europe + Turkey)	2009-2018	Employment, Gender, Education	Employment by sex, occupation and educational attainment (by thousands)
	Research on SI (publications & patents)	Patstat, Scopus and EU OpenAIRE	NA	NA	Education	Research developed on SI (publications & patents)
	Average age when leaving education for the first time	Eurostat table edat_lfso_00t3	15 (Europe)	2000	Demographic change, Education	Young people's social origin, educational attainment level and labour outcomes
	Early leavers from education and training, age group 18-24	Eurostat table tesem020	36 (Europe + Turkey)	2008-2019	Education, Demographic change	Early leavers from education and training refers to persons aged 18 to 24 fulfilling the following two conditions: first, the highest level of education or training attained is ISCED 0, 1, 2 or 3c short, second, respondents declared not having received any education or training in the four weeks preceding the survey (numerator).
	Improve knowledge/skills	ESS7-2014, Variable atncrse	21 (Europe + Israel)	2014	Education	course/lecture/conference in the last 12 months
Social Capital	Total expenditure on social protection by type	Eurostat table tps00101	38 (Europe + Turkey)	2006-2017	Poverty, Demographic Change	% of total expenditure
	Membership of social organisations	European Values Survey, Variable A064	47 (Europe – for 2008)	1981, 1990, 1999, 2008	Other	Membership of a social welfare service, organisation, charity
	Concerns regarding people in the neighbourhood	European Values Survey, Variable E154	47 (Europe – for 2008)	1981, 1990, 1999, 2008	Other	Feel concerned about: People in the neighbourhood
	Support to neighbours	European Values Survey, Variable E164	47 (Europe – for 2008)	1981, 1990, 1999, 2008	Other	Prepared to help people in the neighbourhood

Dimension	Indicator[17]	Source[18]	Number of countries covered	Periodicity	Fields of Action	Definition[19]
	Persons in the at-risk-of-poverty rate by sex and age	Eurostat table ilc_pnp9	34 (Europe + Turkey)	2010-2019	Gender, Poverty	Gender differences in the at-risk-of-poverty rate
	Immigration	Eurostat table tps00176	32 (Europe)	2007-2018	Migration, Demographic Change	Total number of long-term immigrants arriving into the reporting country during the reference year
	Trust in country's parliament	ESS7-2014, Variable trstpr1	21 (Europe + Israel)	2008, 2010, 2012, 2014, 2016, 2018	Other	"How much you personally trust each of the institutions I read out. 0 means you do not trust an institution at all, and 10 means you have complete trust. Firstly... ...[country]'s parliament"
	Trust in the legal system	ESS7-2014, Variable trstlgl	21 (Europe + Israel)	2008, 2010, 2012, 2014, 2016, 2018	Other	"on a score of 0-10 how much you personally trust each of the institutions I read out. 0 means you do not trust an institution at all, and 10 means you have complete trust. Firstly... ...the legal system?"
	Trust in people	ESS7-2014, Variable ppltrst	21 (Europe + Israel)	2008, 2010, 2012, 2014, 2016, 2018	Other	Trust in people
Health	Health personnel	Eurostat table hlth_rs_prsrg	37 (Europe + Turkey)	2014-2018	Health	Number of health personnel (excluding nursing and caring professionals)

Table 22. The European Social Survey (ESS)[20].

Dimension	Indicator	Source	Number of countries covered	Periodicity	Fields of Action	Definition
Media and social trust	Most people can be trusted or you can't be too careful	ESS	19	Every 2 years since 2002. Latest: 2018	Other	"Generally speaking, would you say that most people can be trusted, or that you can't be too careful in dealing with people? Please tell me on a score of 0 to 10, where 0 means you can't be too careful and 10 means that most people can be trusted"
	Most of the time people helpful or mostly looking out for themselves	ESS	19	Every 2 years since 2002. Latest: 2018	Other	"Would you say that most of the time people try to be helpful or that they are mostly looking out for themselves?"
Politics	Worked in another organisation or association last 12 months	ESS	19	Every 2 years since 2002. Latest: 2018	Employment	"There are different ways of trying to improve things in [country] or help prevent things from going wrong. During the last 12 months, have you done any of the following? Have you... ...worked in another organisation or association?"
	Signed petition last 12 months	ESS	19	Every 2 years since 2002. Latest: 2018	Other	"There are different ways of trying to improve things in [country] or help prevent things from going wrong. During the last 12 months, have you done any of the following? Have you... ...signed a petition?"
	How satisfied with life as a whole	ESS	19	Every 2 years since 2002. Latest: 2018	Other	"All things considered, how satisfied are you with your life as a whole nowadays? Please answer using this card, where 0 means extremely dissatisfied and 10 means extremely satisfied."
	State of education in country nowadays	ESS	19	Every 2 years since 2002. Latest: 2018	Education	"Please say what you think overall about the state of education in [country] nowadays?"
	State of health services in country nowadays	ESS	19	Every 2 years since 2002. Latest: 2018	Health	"Please say what you think overall about the state of health services in [country] nowadays?"
Subjective well-being, social exclusion,	How happy are you	ESS	19	Every 2 years since 2002. Latest: 2018	Other	"Taking all things together, how happy would you say you are?"

[20] For the ESS, "dimension" refers to the different themes of variables assessed, "indicator" refers to the different variables assessed and "definition" refers to the specific survey question. The ESS will be particularly relevant to assess the organisational output/societal outcomes dimension of social innovation (see: https://www.tandfonline.com/doi/full/10.1080/10580530.2014.923265). If we want to go even deeper into this dimension, other variables could be considered (e.g. in terms of employment, housing, etc.).

Dimension	Indicator	Source	Number of countries covered	Periodicity	Fields of Action	Definition
religion, national and ethnic identity	Feeling of safety of walking alone in local area after dark	ESS	19	Every 2 years since 2002. Latest: 2018	Other	"How safe do you - or would you - feel walking alone in this area after dark? Do - or would - you feel..."
	How emotionally attached to [country]	ESS	19	Every 2 years since 2002. Latest: 2018	Other	"How emotionally attached do you feel to [country]? Please choose a number from 0 to 10, where 0 means not at all emotionally attached and 10 means very emotionally attached."
Socio-demographics	Doing last 7 days: community or military service	ESS	19	Every 2 years since 2002. Latest: 2018	Other	"Which of these descriptions applies to what you have been doing for the last 7 days? In community or military service"
	Allowed to influence policy decisions about activities of organisation	ESS	19	Every 2 years since 2002. Latest: 2018	Employment	"Please say how much the management at your work allows/allowed you... ...to influence policy decisions about the activities of the organisation?"
	Industry, NACE rev.2: Social work activities	ESS	19	Every 2 years since 2002. Latest: 2018	Employment	"What does/did the firm/organisation you work/worked for mainly make or do? Answer 88: social work activities without accommodation"
	Occupation: ISCO08	ESS	19	Every 2 years since 2002. Latest: 2018	Employment	Number of respondents working in the following types of occupations: 2635 Social work and counselling professionals 3124 Social work associate professionals
Justice and fairness[21]	TBD	ESS	19	Rotating theme, assessed only once: 2018	Other	TBD
Human values	Important to think new ideas and being creative	ESS	19	Every 2 years since 2002. Latest: 2018	Other	"Now I will briefly describe some people. Please listen to each description and tell me how much each person is or is not like you. Use this card for your answer. Thinking up new ideas and being creative is important to her/him. She/he likes to do things in her/his own original way."
	Important that people are treated	ESS	19	Every 2 years since	All	"Now I will briefly describe some people. Please listen to each description and tell me how much each person is or is not like you. Use this card for your answer. She/he thinks it is

[21] Some variables could be relevant such as the perceived fair chance to achieve the desired level of education and job by the individual. However, this is a rotating theme so the questions were assessed only in 2018 and might be re-assessed only in several years.

Dimension	Indicator	Source	Number of countries covered	Periodicity	Fields of Action	Definition
	equally and have equal opportunities			2002. Latest: 2018		important that every person in the world should be treated equally. She/he believes everyone should have equal opportunities in life."
	Important to help people and care for others well-being	ESS	19	Every 2 years since 2002. Latest: 2018	Other	Now I will briefly describe some people. Please listen to each description and tell me how much each person is or is not like you. Use this card for your answer. It's very important to her/him to help the people around her/him. She/he wants to care for their well-being.

Table 23. Blueprint of social innovation metrics: contributions to an understanding of opportunities and challenges of social innovation measurement.

Dimension	Indicator	Source[22]	Number of countries covered[23]	Periodicity	Fields of Action	Definition
Framework conditions - Financial resources (dedicated to social purpose)	Monetary variables of the social economy	National sources (GDP in 2010 at current prices and current PPP)	6 (DK, DE, GR, PL, PT, UK)	2010	All	Share of expenditure as percentage of GDP (national sources, GDP in 2010 at current prices and current PPPs), inflation- adjusted (Data refer to different organisational populations)
	Public social expenditure	OECD Social Expenditure Statistics	6 (DK, DE, GR, PL, PT, UK)	2009	All	Total public social expenditure as percentage of GDP (OECD Social Expenditure Statistics database) – Total public social expenditure as percentage of GDP
		OECD Social Expenditure Statistics database			All	Total public social expenditure per head, at current prices and PPPs
	Private spending	OECD Social Expenditure Statistics	6 (DK, DE, GR, PL, PT, UK)	2009	All	Voluntary private social expenditure as percentage of GDP (including households, individuals, NGOs)
Framework conditions - Human resources	Voluntary working	Study of Volunteering in the European Union, Final Report submitted by GHK, 2010 http://ec.europa.eu/citizenship/pdf/doc1018_en.pdf	15 (EU-27 and the UK)	2010	Demographic Change	Number of volunteers (Volunteering in the European Union, GHK)
	Professionalization/ creative workforce in social fields	National analysis	NA	NA	Education	ISCED 5- facilities offering educational programs for staff in social economy organisations
		Eurostat			Employment	Percentage of 'creative occupations' (used in ordinary innovation metrics: No equivalent for social innovation currently available)
		NA			Employment	Workforce who report wanting to act 'socially entrepreneurially'
Infrastructural resources	Academic resources deployed on social innovation	NA	NA	NA	Education	Number of articles with the keyword "social innovation" per country (not data per country currently available)

[22] Some sources included are too vague and not defined in detail.
[23] The "number of countries covered" refers to the countries that were selected to test data availability of a number of indicators.

Dimension	Indicator	Source[22]	Number of countries covered[23]	Periodicity	Fields of Action	Definition
	Social innovation relevant networks	NA	NA	NA	Other	Number of Ashoka Fellows per country
					Other	Number of Schwab Foundation Fellows per country
					Other	Number of Social Innovation Exchange (SIX) members
					Other	Number and size of other social innovation networks, called 'hubs' or 'labs'
	ICT and overall infrastructure (as basis for social innovation activities)	World Economic Forum, The Global Competitiveness Report	NA	NA	Other	Quality of overall infrastructure
		OECD Broadband statistics			Education, Poverty	Broadband subscribers
		Economist Intelligence Unit			Education, Poverty	E-Readiness Index
		International Telecommunication Union, Measuring the Information Society			Education, Poverty	ICT use index
		United Nations Public Administration Network, e-Government Survey			Other	Government's online service index
		OECD, government at a glance			Education, Poverty	Relation between broadband penetration and citizens uptake of e-government services
Framework conditions - Normative institutions	Tolerance	National sources	NA	NA	Other	Proportion of votes of extremist parties
		National sources			Migration	Proportion of foreigners in total population
		National sources			Migration	Proportion of agreement to xenophobic statements in total population
		World Value Survey			Migration	Acceptance of outsider groups
		World Value Survey			Migration	Tolerance and respect are important educational objectives
	Gender equality	World Value Survey	NA	NA	Gender	"Men have more of a right to get a job in times of job shortages than women – I agree"
		Global Entrepreneurship Monitor			Gender	Women entrepreneurs

Dimension	Indicator	Source[22]	Number of countries covered[23]	Periodicity	Fields of Action	Definition
	Solidarity	European Value Study	NA	NA	Demographic change, Migration	Solidarity with elderly, sick, unemployed and immigrants
	Environmental sustainability	World Value Survey	NA	NA	Environment	"Nature protection is more important than economic growth"
		Eurobarometer			Environment	Interest in environmental pollution
		OECD Environment Policy and Household Behaviour			Environment	Percentage of households having invested in environmentally friendly products in the last ten years
Framework conditions - Regulative institutions	Legislative background for social organisations	National analysis	NA	NA	Employment	Legislative background for starting a social organisation
	Legislative background for social security benefits	National analysis	NA	NA	Other	Committed rights of social security benefits
	Legislative reforms in favour of social innovation	National analysis	NA	NA	Other	Number of new laws and regulations enhancing social innovation or social economy (e. g., Social Value Act in the UK, national analysis)
	Commissioning and procurement	National analysis	NA	NA	Other	Decommissioning rates to capture the 'creative destruction' of innovation (old services being replaced, national analysis)
Framework conditions - Cultural-cognitive institutions	Human rights	United Nations	NA	NA	Other	Universal human right index
Framework conditions - Policy awareness	Policy awareness about social innovation	National sources and analysis	NA	NA	Other	National innovation strategies / social innovation projects funded by government
	Policy awareness about social needs	National sources and analysis	NA	NA	Other	Emphasis of party programs
Framework conditions - Political environment	Political stability and democracy	World Bank, World Governance Indicators	NA	NA	Other	Political stability and absence of violence/terrorism Index
		Freedom House			Other	Freedom-House Index – democratic governance

Dimension	Indicator	Source[22]	Number of countries covered[23]	Periodicity	Fields of Action	Definition
	Government effectiveness	World Bank, World Governance Indicators	NA	NA	Other	Government effectiveness
	Transparency	Transparency International	NA	NA	Other	Corruption Perception Index
	Legislation	World Bank, World Governance Indicators	NA	NA	Other	Rule of law index
		World Economic Forum, Global Competitiveness Index			Other	Judicial Independence
	Press freedom	Reporters Without Borders, Press Freedom Index	NA	NA	Other	Press freedom index
Framework conditions - Needs or demands as reference points for social innovation	Interest in shared social needs	Google	6 (DK, DE, GR, PL, PT, UK)	NA	Education	Google Trends tool
	Request for change	EU Parliament, national parliaments	6 (DK, DE, GR, PL, PT, UK)	NA	Other	Questions and requests to the EU Parliament
Framework conditions - Social engagement and attitudes	Political participation	European Value Survey	6 (DK, DE, GR, PL, PT, UK)	2008	Education	Depth and breadth of citizens' participation
					Education	Participation in signature campaigns
					Education	Participation in boycotts
					Education	Participation in authorized demonstrations
	Memberships in civil society organisations	European Value Survey	6 (DK, DE, GR, PL, PT, UK)	2008	Other	Membership in humanitarian or charitable organisations
					Education	Membership in religious organisations
					Education	Membership in organisations of arts, music or education
					Environment	Membership in nature protection
					Other	Membership in associations in sports and recreations
	Citizens' attitudes towards entrepreneurship	Flash Eurobarometer	NA	NA	Employment	Attitudes towards starting a company (moving average over 2 years)

Dimension	Indicator	Source[22]	Number of countries covered[23]	Periodicity	Fields of Action	Definition
	Citizens' openness for something new, risk taking	Flash Eurobarometer	6 (DK, DE, GR, PL, PT, UK)	NA	Education, Demographic Change	Positive attitude towards taking risks (moving average over 2 years)
		Eurobarometer			Education, Demographic Change	Interest in inventions and new technologies
Entrepreneurial activities – Entrepreneurial investment activities	Investment in innovation by social economy organisations	Community Innovation Survey	NA	NA	Other	Expenditure in innovation by firm size (used in ordinary innovation metrics – No equivalent for social innovation currently available)
Entrepreneurial activities – Entrepreneurial start-up activities and death rates	Number of start-ups	Global Entrepreneurship Monitor	3 (DE, GR, UK)	2009	Employment	Early-stage social entrepreneurial activity as percentage of the working population
	Number of death rates	OECD Business demography database	NA	NA	Employment	Enterprise death rate
	Business environment for starting a business	International Bank for Reconstruction and Development/World Bank Doing Business 2010	6 (DK, DE, GR, PL, PT, UK)	2009	Employment	Starting a business: procedures (number); time (days); cost (% of income per capita); minimum capital (% of income per capita)
Entrepreneurial activities – Collaboration and networks	Citizens' involvement in entrepreneurial activities	OECD Time Use Surveys database	6 (DK, DE, GR, PL, PT, UK)	NA	Employment	Time spent volunteering, best to be specified in which kind of organisation
	Clusters	World Economic Forum, Executive Opinion Survey	NA	NA	Employment	State of cluster development (used in ordinary innovation metrics: No equivalent for social innovation currently available)
Output and outcome of social innovations – Equality opportunities / inequalities	Disabilities	EUSI	6 (DK, DE, GR, PL, PT, UK)	NA	Other	Equal opportunities / inequalities regarding disabled people
	Gender	OECD	6 (DK, DE, GR, PL, PT, UK)	2009	Gender	Share of women in graduates in ISCED 5 A, 5 B and 6
		EUSI			Gender	Equal opportunities/inequalities regarding women / men (EUSI)
	Migration	OECD	5 (DK, DE, PL, PT, UK)	2000, 2004, 2009	Migration	Share of foreign students in all students: Foreign students as a percentage of total tertiary enrolment
		EUSI			Migration	Equal opportunities/inequalities regarding citizenship groups (EUSI)

Dimension	Indicator	Source[22]	Number of countries covered[23]	Periodicity	Fields of Action	Definition
Output and outcome of social innovations – Skill acquisition	Social and personal competence	OECD Better Life Index	6 (DK, DE, GR, PL, PT, UK)	2010 or latest available year	Education	Educational attainment – percentage of people, aged 25 to 64, having at least upper-secondary (high school) degree
	Subject-specific and methodical competence	OECD	6 (DK, DE, GR, PL, PT, UK)	2009	Education	PISA results in problem solving
					Education	PISA results in reading, age 15
					Education	PISA results in math
Output and outcome of social innovations – Access and quality of health facilities	Satisfaction with system of health care	EUSI	NA	NA	Health	Trust in institutions: system of health care (EUSI)
	Access	EUSI	NA	NA	Health	Regional disparities of the availability of health care facilities (EUSI)
Output and outcome of social innovations – Health status and research	Health status	OECD Health data, European Union Statistics on Income and Living conditions	NA	NA	Health	Adults reporting good or very good health
		OECD Health Data			Health, Demographic Change	Life-expectancy at birth
	Health-related patent	OECD Patent Database	NA	NA	Health	Health-related patents
Output and outcome of social innovations – Jobs and Earning	Employment rate	OECD, Labour Force Statistics database	NA	NA	Employment	Long-term unemployment rate
	Equality opportunities / inequalities	International Labour Organization, Key Indicators of the Labour Markets Net	NA	NA	Gender, Employment	Female participation in labour force
		EUSI			Gender	Equal opportunities/inequalities regarding employment of women / man, disabled people, citizenship, generations
		World Bank			Other	GINI Index
	Income	OECD National Accounts database and Economic outlook	NA	NA	Employment	Average annual earnings of full-time employees
Output and outcome of social innovations – Work and Life	Working hours	OECD Labour Force Statistics database	NA	NA	Employment	Employees working very long hours
		OECD Time Use Survey database			Other	Time devoted to leisure per day
	Satisfaction with work-life time balance	Second European Quality of Life Survey	NA	NA	Employment	European workers satisfied with their work-life time balance

Dimension	Indicator	Source[22]	Number of countries covered[23]	Periodicity	Fields of Action	Definition
	Work and family	OECD Family database, national sources, OECD Labour Force Survey database	NA	NA	Employment, Education	Employment rate of women with children of compulsory school age
Output and outcome of social innovations – Housing situation	Living space	European Union Statistics of Income and Living Conditions, national statistic offices	NA	NA	Other	Rooms per Persons
		EUSI			Other	Living space per Person
	Living environment	EUSI	NA	NA	Environment	Accessibility of shops, public transport, family doctor
		EUSI			Health, Environment	Noise / air / environmental pollution
		EUSI			Environment	Accessibility of green spaces
		EUSI			Poverty	Crime in the residential area
Output and outcome of social innovations – Housing access and quality	Homelessness and poor housing	EUSI	NA	NA	Environment, Health, Poverty	Homelessness and poor housing
	Satisfaction	Gallup World Poll	NA	NA	Other	Satisfaction with housing
Output and outcome of social innovations – Social Capital and networks frequency and quality	Frequency	European Union Statistics on Income and Living Conditions	NA	NA	Other	Frequency of social contact
	Quality	Gallup World Poll	NA	NA	Other	Trust in others
		EUSI			Other	Quality of social relations at the work place
Output and outcome of social innovations – Social cohesion	Social cohesion between generations	EUSI	NA	NA	Demographic change, Poverty	Care for old-aged household members, has to be controlled by comparing levels of poverty, to separate economic necessity from social cohesion
	Social networks	Gallup World Poll	NA	NA	Other	Social network support
Output and outcome of social innovations – Voting and being informed	Voter turn-out	International Institute for Democracy and Electoral Assistance	NA	NA	Other	Voter turn-out
	Being informed	World Association of Newspapers and News Publishers, World Press Trends	NA	NA	Other	Daily newspapers' circulation

Dimension	Indicator	Source[22]	Number of countries covered[23]	Periodicity	Fields of Action	Definition
Output and outcome of social innovations – Citizens' active involvement	Participation in political activities	European Social Survey	NA	NA	Other	Participation in political activities other than voting
	Involvement in rule-making	OECD Regulatory Management Systems' Indicators Survey	NA	NA	Other	Consultation on rule-making
Output and outcome of social innovations – Environment patents and certificates	Environment-related patents	OECD Patent Database	NA	NA	Environment	Renewable energy patents
		EPO Worldwide Patent Statistical Database			Environment	Patent applications in pollution abatement and waste management technologies
		OECD Patent Database			Environment	Patents for climate change mitigation technologies
	Environment-related certificates	International Organization for Standardization (ISO), The ISO Survey of Certification	NA	NA	Environment	ISO 14001 Environmental management systems
Output and outcome of social innovations – Preservation of natural capital and resources	Protected area	NA	NA	NA	Environment	Share of protected areas
	Renewable energy	EUSI	NA	NA	Environment	Share of renewable energy sources (EUSI)
	State of environment	EUSI	NA	NA	Environment	State of environment: Quality of air, water, forests, soil
		Yale University and Columbia University			Environment, Health	Environmental Performance Index: Environment health (e. g., air – effects on human health) and ecosystem vitality (e. g., biodiversity)
		OECD based on Eurostat CIS 2008 and national sources			Environment	Benefits of environmental innovations
		EUSI			Environment	Stock of natural resources (e. g., minerals, oil, wood, flora, fauna)
		National Footprint Accounts			Environment	Ecological Footprint (nations' demands on global regenerative capacity)

Table 24. European Microfinance survey.

Dimension	Indicator	Source[24]	Number of countries covered	Periodicity[25]	Fields of Action	Definition
Key Institutional Characteristics	Institutional Types	European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2016-2017	Employment	Share of MFIs by institutional type
		European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2016-2017	Employment	Share of MFIs that submit to a regulatory authority by institutional type
	Age	European Microcredit Survey 2016-2017	27 (Europe + Turkey)	Before 1990, 1990-1994, 1995-1999, 2000-2004, 2005-2009, 2010-2014, 2015-2018	Employment	Share of MFIs by starting period of microlending activities
	Paid Staff Employed	European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2017	Employment, Education	Share of MFIs per staff category
		European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2016-2017	Employment	Average number of paid staff (FTE) per institution
		European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2016-2017	Gender, Employment	Share of average number of paid women staff (FTE) per institution
		European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2016-2017	Employment	Average number of full-time equivalent employees by institutional type
	Focus on Microlending Activities	European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2016-2017	Employment	Share of MFIs by turnover dedicated to microlending
		European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2016-2017	Employment	Share of turnover dedicated to microlending activities by institutional type
Range of Products and Services	Financial Products and Services	European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2017	Employment	Share of MFIs by type of financial products and services offered
		European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2016-2017	Employment	Types of financial products and services offered by institutional type
		European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2016-2017	Employment	Share of MFIs by type of microloans offered
	Microloan Terms and Conditions	European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2016-2017	Employment	Average microloan term by institutional type (months)
		European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2016-2017	Employment	Average annual percentage rate by institutional type

[24] The source from the European Microfinance Survey Report 2016-2017 refers to the survey developed under the study.
[25] The European Microfinance Survey Report covers data collected in the period between 2016 and 2017.

Dimension	Indicator	Source[24]	Number of countries covered	Periodicity[25]	Fields of Action	Definition
	Non-financial Products and Services	European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2016-2017	Employment	Type of products and services offered by institutional type
		European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2016-2017	Employment	Types of products and services by MFIs' size
		European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2016-2017	Employment	Share of non-financial services
		European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2016-2017	Employment	Types of non-financial products by institutional type
		European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2016-2017	Employment	Share of MFIs by modality of delivering non-financial products and services
		European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2016-2017	Employment	Share of MFIs by method of delivering non-financial products and services
		European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2016-2017	Employment	Modality of delivery for non-financial products and services by institutional type
		European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2016-2017	Employment	Number of clients reached by non-financial products and services by institutional type
		European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2017	Employment	Average number of clients targeted by institutional type
	Digitalisation	European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2016-2017	Employment	Share of MFIs by digital solutions offered to clients
		European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2016-2017	Employment	Share of MFIs by digital tools used to interact with clients
Social Performance and Outreach	Mission	European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2016-2017	Employment	Share of MFIs by mission
		European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2016-2017	Employment	Missions by institutional types
		European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2016-2017	Employment	Primary missions by region
	Target Groups	European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2016-2017	Employment	Target groups
		European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2016-2017	Employment	Target groups by institutional types
	Type and Age of Businesses Supported	European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2016-2017	Employment	Type of business served
		European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2016-2017	Employment	Type of businesses served by institutional type
		European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2016-2017	Demographic change	Age of businesses served
		European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2016-2017	Demographic change	Age of businesses served by institutional type

Dimension	Indicator	Source[24]	Number of countries covered	Periodicity[25]	Fields of Action	Definition
	Scale and Outreach of Microlending Activities	European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2016-2017	Employment, Poverty	Share of total number of active borrowers by business and personal microloans
		European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2016-2017	Employment, Poverty	Share of total amount of outstanding portfolio by business and personal microloans
		European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2016-2017	Employment, Poverty	Share of total number of disbursed business and personal microloans
		European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2016-2017	Employment, Poverty	Share of total value of disbursed business and personal microloans
		European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2017	Employment	Microloan activity by institutional type
		European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2016-2017	Employment	Outstanding microloan portfolio by institutional type
		European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2016-2017	Employment	Share of MFIs by number of microloans disbursed
		European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2016-2017	Employment	Share of MFIs by number of microloans disbursed by institutional type
		European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2012-2017	Employment	Trend in microloan portfolio indicators for 34 selected MFIs
		European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2016-2017	Employment	Average microloan size by institutional type
		European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2016-2017	Employment	Country average microloan size as percentage of GNI per capita
Portfolio Quality, Financial Performance Indicators and Funding	Portfolio Quality	European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2016-2017	Employment	Number of MFIs by portfolio quality indicators
		European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2016-2017	Employment	Averages for PAR30 + Write-off ratios by institutional type
		European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2016-2017	Employment	PAR30 and write-off ratios for business and personal microloans (averages)
		European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2016-2017	Employment	PAR30 and write-off ratios for business and personal microloans by institutional type (averages)
	Asset-Liability Management	European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2016-2017	Employment	Number of MFIs by asset-liability management indicators
		European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2016-2017	Employment	Asset-liability management by institutional type
	Efficiency and Productivity	European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2016-2017	Employment	Number of MFIs by efficiency and productivity indicators
		European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2016-2017	Employment	Efficiency and productivity by institutional type
		European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2016-2017	Employment	Number of MFIs by profitability and sustainability

Dimension	Indicator	Source[24]	Number of countries covered	Periodicity[25]	Fields of Action	Definition
	Profitability and Sustainability	European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2016-2017	Employment	ROE and ROA by institutional type
		European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2016-2017	Employment	OSS ratios by institutional type
	Funding Structure	European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2017	Employment	Funding structure by value and type of institution
	Funding Needs	European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2017	Employment	Structure of additional funding needs by value and type of institution
		European Microcredit Survey 2016-2017	27 (Europe + Turkey)	2016-2017	Employment	Challenges by institutional type