MEASURING SOCIAL INNOVATION

A key Element of Mission-oriented **Policy**



Social Innovation – Quo vadis?

In response to the grand societal challenges reflected in the United Nations Sustainable Development Goals (SDGs), the transition towards a more environmentally, economically and socially sustainable way of life has gained momentum. At the same time, we are witnessing a paradigm shift in research and innovation policy away from interventions to address market, system, and transformational failures towards addressing major societal challenges such as climate change, aging societies, and inclusive as well as smart growth. In this context, missions as a new policy instrument imply setting the direction for change, opening the innovation process to new actors, and posing questions about the social added value of innovations.

//////// In a nutshell

- Social innovations are a central component of the German innovation ecosystem. They are anchored in research and innovation policy and have the potential to make an important contribution to overcoming societal challenges, and therefore to achieving the Sustainable Development Goals.
- Evidence-based cross-policy support for social innovation requires appropriate data; however, the measurement of social innovation is still in its infancy.
- The IndiSI+ framework model serves as the basis for a holistic measurement approach to capture social innovations, which we advise should be developed further and implemented by policy makers (www.si-metrics.eu).1

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Social Innovation is now a central element of political agendas, from the municipal and regional level to the national and supranational level of the European Commission and the OECD. In Germany, mission-oriented research and innovation policies are gaining momen-

tum, and political interest in social innovations has grown significantly. For example, the federal government's High-Tech Strategy 2025 states "our goal is promoting technological and non-technological innovations, including social innovations that focus on the benefits for people. [...]" (BMBF, 2018: 4).

Such a mission-oriented understanding of innovation includes civil society (citizens, NGOs, welfare organizations, associations) as an important innovation actor in addition to the

"classic" innovation actors such as research and development institutes or firms. Similar to commercial or technological innovations, social innovations aim to improve or develop existing practices, or to do something new. However, social innovations' focus lies on social challenges or problems that need to be addressed in more effective ways. They often originate in informal everyday contexts and less in R&D departments: Solutions arise exactly where individuals encounter certain problems. However, we see social innovations blossom in some areas and not in others. So the question is: under what conditions do social innovations materialize? It is important to notice that social innovations are much broader in character than scientific and technological innovations. They often relate to services rather than products, and also encompass new forms of cooperation and governance.

On the relevance of measuring social innovations

Social innovations are one of the drivers of a modern social market economy and a functioning society more generally. Social innovations are firmly anchored in the coalition agreement of the new German government, which states: "We are developing a national strategy for social enterprises in order to provide greater support for economic action that is oriented at public welfare and seeks to generate social innovations." The report of the

High-Tech Forum, which advised the former German government on its innovation strategy in 2019-2020, promotes similar types of action. Besides, the German Ministry of the Economy (BMWi) has been looking for organizations "with social impact" in its current round

of funding within the "Innovation Program for Business Models and Pioneering Solutions" (IGP). And in 2020, the Germany Ministry of Science Education and (BMBF) launched the "Society of Ideas" initiative aiming to stimulate and support social innovations explicitly. This ministry also drove the development of a cross-policy strategy on fostering social innovation, which involved and is supported by nine federal ministries. This is clear proof that social innovations are becoming increasingly relevant for political decision-

Social innovations designate new solutions to societal problems and needs. They promote change in social practices through initiating new forms of interaction, cooperation, governance or knowledge transfer.

making.

This makes the question of how to measure social innovation all the more relevant and urgent, because a lack of data is one of the main factors that stymie targeted support for social innovation (Krlev, 2021). It is important to obtain early information about relevant needs, actors, and potential solutions, as well as about social innovation capacities - i.e., the context or ecosystem of their emergence. We already see considerable disparities regional innovation activities as well as in living conditions, which are expected to increase in the future (Dahlbeck, 2020). Probing where, how and why social innovations occur are one key to master societal challenges in the future. In addition to other forms of innovation, social innovations can provide important impulses for actively shaping transformative processes in regions. They can thereby help to secure and increase prosperity and quality of life. In order to leverage and exploit the regional potential of social innovations, a suitable evidence base is needed.

This is in line with the call for agility of research and innovation policy by the Expert Commission on Research and Innovation (EFI) in its most recent report (EFI, 2021). It is crucial for political actors to be able to respond promptly and flexibly to a dynamic environment with rapidly changing social, economic, market and technological developments. This ideal can be achieved by redesigning existing strategies, structures

and processes as well as by introducing and implementing new ones (Weber et al., 2021). Agile policy action necessitates anticipating possible societal challenges and changes in the innovation system at an early stage and finding answers to them in a way that allows for the participation of relevant stakeholders. This requires a suitable data basis, which can be created through strategic foresight. The aim should be to identify future risks and opportunities today in order to create scope for future solutions.

We know very well how and when commercial innovations emerge, by whom they are driven and how we can identify them. Internationally, there are many indicator frameworks dedicated to this issue, such as the Mannheim Innovation Panel (MIP) of the Centre for European Economic Research (ZEW). Unfortunately, and in stark contrast to this situation, we have hardly any data on social innovations and the conditions under which they emerge.

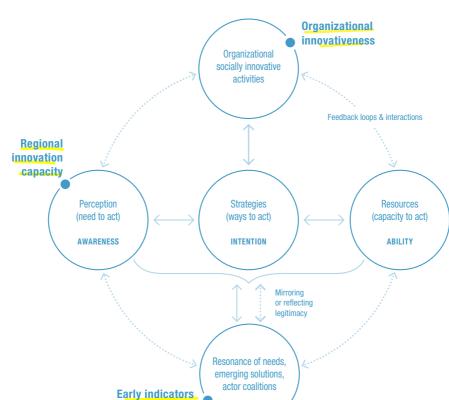
The BMBF-funded IndiSI project (https://www.si-metrics.eu) took a first important step towards measuring social innovations by developing a measurement tool to capture organizational innovativeness, regional innovation capacities and resonance in social media. The indicator set was tested in the Rhine-Ruhr region. It generated a new data basis for research and innovation policy that is sensitive to new forms of innovation and innovation actors and thus provides an evidence base for improved and tailor-made funding programs. IndiSI includes new innovation actors and provides a trial run for new in-depth research approaches. IndiSI+ now aims to use the tools developed to collect data in other regional contexts to analyze and compare social innovation capacities (NUTS-3 or larger). In doing so, it seeks to address a number of barriers that have been previously identified. We discuss barriers for each of the three levels and show how our measurement approach seeks to meet them.

What are the problems in our understanding of social innovations?

Research as well as governance of social innovations still has an experimental character. This inchoate state is produced because social innovation comes with a number of challenges:

- the plurality of social innovations whose manifestations can range from individual initiatives to social movements;
- the new innovation actors involved, e.g. civil society organizations or social enterprises, which are not yet listed in established statistics or can only be identified to a limited extent;
- the challenge of capturing symbolic knowledge as a counterpart to analytical, technical knowledge which can be measured in patents, and
- the fuzzy nature of the impacts of social innovations and how they diffuse into society.

These unique properties of social innovations require a comprehensive framework model (see the figure below), which serves as a basis for a holistic measurement approach of social innovations. Our measurement approach provides information about socially innovative organizations, social innovation capacities, infrastructures, framework conditions and the social climate in regions as well as about discourses in social media, the actors driving them and the potential solutions these actors may communicate about. Our framework model refers to iterative social processes that are characterized by interactions, interdependencies and feedback loops.



in discourse

First, organizations are drivers of social innovation. In assessing organizational innovativeness, we apply a broad understanding of relevant organizations that allows us to uncover social innovations promoted by actors with different legal forms, including commercial as well as non-profit organizations. The starting point for this is the assumption that social innovations transcend existing sectoral boundaries and can be found in charitable organizations, private-sector companies, social enterprises, associations, NGOs, NPOs, etc. (Terstriep et al., 2020). We understand organizational social innovativeness as the extent to which organizations implement new solutions (products, processes, procedures) that contribute to the achievement of the Sustainable Development Goals (SDGs) (Subramian & Nilakanta, 1996; Carcia & Calantone, 2003; Ruvio et al., 2014). To measure organizational innovativeness, we draw on indicators in four areas: (1) formal structures, (2) innovation activities, (3) business models, and (4) governance. In addition to the socially innovative activities of organizations, the indicator set also maps their orientation towards social needs and values (SDGs) as well as their local embeddedness and interactions with different stakeholder groups. In this context, some questions were borrowed from classical innovation measurement, but about 80% of the survey contains new or adapted questions, for instance such that cover aspects of civic engagement or organizations' impact model.

Second, social innovations often emerge as regionally embedded and in a close interaction of organizations with the population. Therefore, indicators of societal activity, participation and attitudes are very important. In regional innovation capacities, we distinguish between the perception of problems and possible solutions (Are people aware of what needs to be done and what could be done?), the intention to act (Do people intend to do something about social problems?) and the ability to act (Are people socially active and can they develop possible solutions?). For the most part, indicators such as social trust play a role here, which are not considered at all in classic innovation measurement and are therefore taken from a variety of other surveys, such as the European Social Survey (Krlev et al., 2021).

Third, tracking online discourses using resonance indicators allows us to understand perceptions of pressing social needs and to identify proposals for new solutions and the actors driving them at an early stage. Online discourses are understood as virtual spaces in which legitimation for social needs emerges and diffuses into society. Social media are thus both "drivers" and "enablers" for social innovations. As "drivers," they act as a mirror of broader societal discourses and can show the areas in which social challenges, social needs for action and possible solutions are being discussed. As "enablers," they open up networking possibilities that are independent of space and time, through which relationships between individuals and other relevant actors can be established very quickly (Strambach & Thurmann, 2021). The indicators encompass three interdependent dimensions: (1) awareness, which is the visibility of certain terms or topics as well as overlaps of perceptions between different actors within a specific discourse; (2) legitimacy, which indicates whether certain topics are central to a discourse, whether they are universally accepted or contested as well as which actor constellations have an influence on discourse dynamics; and (3) resource mobilization, which is visible in discourses through tags and mentions of concrete actions such as corporate activities, citizen activism, or specific events. The interaction between the resonance indicators of online discourses and contextual factors is what makes social innovations possible in the first place. Social discourses and their analysis in foresight processes have so far played a very minor role in measuring innovation. However, the measurement of the early phases of innovation processes of all kinds has a high significance for the decision-making processes of organizations as well as the optimization of governmental innovation support.

What are the obstacles in the measurement of social innovations?

So far, we know very little about the social innovativeness of organizations, especially which resources, structures and processes organizations use internally and externally in collaboration with partners to generate social innovations. First, this is because it is difficult to develop adequate survey tools for activities that are much harder to grasp than for example R&D expenditures and processes. Second, this is because it is challenging to account for the heterogeneity of social innovation actors. We know that social innovation is driven

in particular within for a where a variety of actors meet (see for example the #WirVsVirus Hackathon of the German government, or the "Society of Ideas" initiative of BMBF we mentioned earlier). However, many relevant actors, such as social enterprises are not well documented statistically at all, or existing surveys distinguish between relevant target groups instead of considering them in unison. Classic innovation surveys for instance almost exclusively target companies whereas volunteer surveys target civil society organizations. What we need instead is a combination of these perspectives and groups.

While the survey of regional innovation capacity can draw from a variety of established surveys, these need to be combined in fundamentally new ways to capture relevant regional conditions for social innovation. We had to recalibrate questions, adapt scales and combine elements of classical innovation surveys with general population surveys or other "socially oriented" surveys. The informational value of secondary data from public statistics is severely limited because they often miss the core of social innovations. What is more, the use of existing secondary data from population surveys is limited because they are usually only representative at the national level, but not the regional, not to speak of the local level. So, they fail to provide insights into social innovation in regional contexts. That is why more finegrained and targeted, primary population surveys are necessary.

In order to map developments in social discourse and the communication and interaction processes between the various actors involved (e.g., individuals, social groups, foundations, clubs, associations, firms, public administration etc.) in a timely manner and to realize an analysis of early indicators, data from social media channels are particularly useful. The availability of this data has recently increased, for example, because Twitter allowed access to its data for research purposes. However, new kinds of data analysis techniques are need to capture social problems, possible solutions as well as drivers to and obstacles to these approaches. Social science methods, such as network or discourse analyses, have to be applied in combination throughout a continuous foresight process in order to identify social innovations at an early stage.

We are not alone in making these observations and claims. The recently published OECD Local Economic and Employment Development (LEED) Report entitled "Building local ecosystems for social innovation" takes up some of the ideas and preliminary work of the partners involved in IndiSI and outlines a similar approach. Corresponding data and surveys should follow on the part of the OECD. We call for such efforts to be complemented by policy initiatives at the national level.

A call to action for policy makers

If decision-makers at the national, federal, regional, or local level are serious about promoting social innovation, we urgently need improved data. This would help to answer the following questions, in order to support social innovations in an evidence-based way:

- Who "makes" social innovations? And how does it work?
- What attitudes do citizens have towards issues that are relevant for the emergence of social innovations? What do citizens themselves contribute to the emergence of social innovations?
- Which debates between social actors help us identify problems and emerging solutions at an early stage?

Methods have been and continue to be developed and tested within IndiSI+. However, this should not remain a one-time activity, but should lead to institutionalized long-term applications. Two scenarios are possible.

Scenario 1: Integration into existing surveys

This first scenario envisages the inclusion of selected indicators for measuring social innovation in ongoing surveys. There are a number of organizational surveys that may integrate components and indicators of the IndiSI framework model. These include the Mannheimer Innovation Panel (MIP), the results of which are included in the European Union's Community Innovation Survey, the CC Survey on corporate citizenship in Germany, or the Stifterverband's survey "Zivilgesellschaft in Zahlen" (Civil Society in Numbers) (ZiviZ), which targets civil society organizations (including associations, cooperatives, foundations and non-profit limited liability companies (gGmbHs)) and assesses the level of voluntary engagement.

The main advantage of this scenario is the integration into surveys, which are representative for Germany, which have a high coverage and are widely recognized.

Integration into such surveys is also associated with low additional costs.

The central disadvantage of this scenario is that only selected aspects of the social innovation activities of organizations can be measured using ongoing surveys. The MIP, for example, is also based on a narrow understanding of enterprises and does not cover the "new" actors that are central to social innovation, such as charitable organizations, non-profit associations or cooperatives.

To measure social innovation capacities in geographic contexts, one could combine data from established surveys. However, this is not sufficient to measure social innovations at the regional level, since existing data at this level is not representative and thus provides only limited information. It would therefore be necessary to have dedicated surveys with a panel structure that could be established and coordinated at the municipal, regional or state levels, or be combined with existing surveys at these levels.

Unlike the survey of organizational innovativeness and regional innovation capacities, which are each taken at a specific point in time, the resonance indicator as a new instrument for measuring social innovation require continuous observations and cannot be integrated into existing organizational or population surveys due to their methodological specificities. However, they can complement existing surveys. Targeted resonance analysis can be used as a tool to quickly identify individuals, groups, organizations, or social needs that can be integrated into foresight studies. These tools are particularly interesting in the field of social innovation activities, because relevant actors often do not appear in official statistics.

Scenario 2: Independent survey

Establishing an independent survey of social innovations would allow for a comprehensive consideration of the specifics of social innovations. The measurement instrument could be broadly designed to consider various innovation actors, across legal forms and fields of activity. Such a survey would also give us the possibility to account for the heterogeneity of social innovation activities with their cross-sectoral character and their relation to the Sustainable Development Goals (SDGs). A recurring panel survey would be the preferred option.

The long-term monitoring would open up the possibility of identifying new phenomena and actors at an early stage.

The added values of an independent survey are primarily its comprehensiveness as well as its ability to integrate social innovation indicators across the three levels. This would not only enhance our ability to understand the interconnections and dynamics between the levels, but also to detect needs and opportunities for policy action early on. Funding measures and investment projects could then be adjusted in a timely manner. This is of particular importance due to the complexity of social innovation processes and the high level of dynamism as problem situations change rapidly.

The need to pave new grounds

An essential prerequisite for the realization of both scenarios is to validate the developed indicators as well as the survey method through additional surveys in other regions. Only by establishing comparability across regions, can we gain more detailed insights on the links between measurement levels and the dynamics in the emergence of social innovations. To enable this, it is critical to realize that social innovation measurement requires new kinds of policy action and cannot be promoted by simply replicating existing innovation policies.

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