

Received: December 2024  
Accepted: March 2025  
DOI: 10.7862/rz.2025.hss.10  
CC-BY 4.0

Krisztina VARGA<sup>1</sup>

## THE POSSIBILITY OF MEASURING THE SOCIAL INNOVATION IMPACT

This study aims to explore the possibilities of measuring the impact of social innovation. The methodology for measuring social innovation was originally based on economic indicators, but aspects of the concept suggest that the fundamental purpose of the process is to ensure and increase well-being, which requires a rethinking of the measurement structure. Defining a model for measuring processes, both the outcome and impact, requires a combination of top-driven (theoretical) and bottom-up (practical) strategies. This paper methodologically explores possible methods and approaches for measuring the impact of social innovation programs through a structured review of the literature and an analysis of different measurement methods. The study concludes that continuous refinement and improvement of the methods is essential, and that a transparent and coherent structure is warranted. Given the difficulties and limitations of quantifying indicators, it is a question of evaluating rather than measuring the impact of social innovation programs.

**Keywords:** measuring, social innovation, indicators, impact.

### 1. INTRODUCTION

The social and economic challenges of the 21st century go beyond previous innovation research and require a new, thoughtful analysis of different types of innovation. Today's emphasis on innovation research also requires the study of innovations related to social issues. Alongside technical innovations, there is at least as much emphasis on efforts to ensure social well-being (Hochgerner, 1999). Defining a measurement structure for the social innovation process is essential because:

- in addition to economic and technological innovations, the role of social innovations in research, policymaking and the life of communities is of increasing importance,
- measurement helps to further explore the interactions between economic and social innovation,

the specific process of social innovation requires the development of scientifically sound and empirically verifiable indicators.

While there are several methodological recommendations for measuring technical innovation (e.g. the Community Innovation Survey – a biannual innovation survey carried

---

<sup>1</sup> Krisztina Varga, University of Miskolc, Hungary; e-mail: krisztina.varga.t@uni-miskolc.hu.  
ORCID: 0000-0001-7112-8800.

out in EU Member States), the framework conditions for measuring social innovation are not yet clear. The basic objective of this study is to present a measurement structure that can provide a measurement of the social innovation process at the micro, meso and macro levels and analyze the link between each level of activity. The measurement framework is expected to allow for the analysis of the measurement results to generate social innovation efforts and to 'transfer' good practices that can be adapted to the most disadvantaged areas.

## 2. LITERATURE REVIEW

Defining a measurement structure for social innovation is a complex task that requires an examination of the opportunities and limitations of methodologies for measuring technical innovation. In measuring social innovation, the starting point is to define indicators and identify them as input, output and impact indicators, in line with the systemic nature identified for technical innovation.

Defining a model to measure the process, outcome and impact of social innovation efforts requires a joint examination of top-driven (often theoretical) and bottom-up (practical strategies based on civic engagement) strategies. The literature review suggests that measurement emphasizes the systemic nature of innovation processes (Dawson, Daniel, 2010; Carvache-Franco et al., 2018; Neumeier, 2017; Döringer, 2017; Mulgan et al., 2007; Cajaiba-Santana, 2014; Benedek et al., 2015; Szendi, 2018), but there is no uniformly accepted measurement methodology in the literature (Krlev et al., 2014, Benedek et al., 2015, Balaton, Varga, 2017, Szendi, 2018, Varga et al., 2023). The European Union guidelines focus on the assessment of the input, output and impact factors of the efforts related to the different levels, in line with the systemic nature of the innovation process. In addition to measuring the input and output factors of social innovation initiatives, the analysis of the impact on society is also emphasized. The main objective of each of the methods examined is to identify the social innovation potential at national, regional or local level. The focus is primarily on measuring social innovation potential, which is the set of capabilities that facilitate the creation of social innovations (Benedek et al., 2015; Szendi, 2018; Kleverbeck et al., 2019; Varga et al., 2023), as distinct from the basic conditions for social innovation, which are the necessary conditions for the creation and implementation of innovations in a given region or organization (Szendi, 2018; Varga et al., 2023; Varga, Tóth, 2024).

Studies focusing on measuring social innovation potential initially focused on macro-level analyses. There is considerable variation between macro-level studies in the indicators used. Measurement methods use both quantitative and qualitative indicators and consider the range of data available for a given country.

The focus of the analysis of meso-level social innovations is on the analysis of innovative regional cooperation. Once the interrelationships have been explored, it will be possible to identify the framework conditions involved in generating regional social innovation. Inter-municipal linkages, network analysis, identification and analysis of NUTS 2 and NUTS 3 level cooperation will allow measuring the process of regional social innovation. Measuring social innovation potential is a priority at regional level to help catching up. As in the case of national analyses, regional methods differ both in terms of their calculation procedures and the indicators used. One of the main reasons for this is that the range of data available in the regions concerned also varies. The analysis of social innovation at micro level is based on the involvement of enterprises, social enterprises and civil society organizations implementing social innovations at organizational level,

complemented by innovative partnerships between residents and municipalities. Through innovative co-operations, municipalities provide new responses to community problems that meet local needs, while at the same time improving community well-being. When examining initiatives at the organizational level, the cooperation between (local) government and the civil society based on innovative business models deserves special attention (Battilana and Casciaro, 2012; Grassl, 2012; Unceta et al., 2016). Local measurement methods are few, but their importance has increased recently. If the results of initiatives at local level can be quantified, good examples can be formulated that can be adapted to other organizations and municipalities, supporting the generation of further innovations. The local method is expected to identify and assess the basic conditions (necessary factors) and capabilities of social innovation, i.e. the social innovation potential.

### 3. METHODOLOGY

The possible methods and approaches for measuring social innovation impact vary depending on the different economic and social organizations. The aim is to continuously refine methods and make them more effective. Due to the difficulties and limitations of quantifying indicators, we are talking about assessing rather than measuring the social innovation impact.

The authors Dainiené and Dagiliené (2016) have defined the measurement dimensions of the impact of the social innovation process at the organizational level. The proposed method is a theoretical approach focusing on the social innovation process and a measurement method based on the dimensions of the Triple Bottom Line (TBL) approach. Each stage of the process also defines each stage of the measurement framework (Table 1).

Table 1. TBL dimensions and indicators

<b>TBL DIMENSION</b>	<b>Indicator</b>
<b>social</b>	community relations, product safety, initiatives on training and education, charity, volunteering, and the employment of disadvantaged groups
<b>environmental</b>	compliance with the legislation, insurance, landscaping, remediation, number of complaints, reports, water use, energy consumption, pollutant emissions, environmental risks and hazards, waste generation
<b>financial</b>	profit, cost accounting, product and service demand, prices, profit margins, innovation applications

Source: Author's own elaboration (based on Dainiené, Dagiliené, 2016).

The study will then identify the dimensions of the process after the selection of the social innovation endeavor, followed by the measurement framework and the calculation of the resulting social value. The study suggests that the main challenge of the study is to combine quantitative and qualitative indicators, one of the solutions being the use of the TBL approach to measure sustainable development. The Triple Bottom Line facilitates measurement at the organizational level along three dimensions (Elkington, 1997; Hubbard, 2009; Slaper, Hall, 2011; Dainiené, Dagiliené, 2016): social, environmental and financial. The TBL dimensions aim to identify and measure the impacts of organizational activities on people, the environment and the economy. According to the authors, there is

no single set of indicators that can be used to assess the full range of initiatives at the organizational level, but the use of the indicators proposed by TBL allows the value of social innovation to be measured. The dimensions proposed by the study help to measure the impact of the social innovation process on the economy, the environment and society.

The definition of the indicators linked to the dimensions depends on the organizational characteristics, but it can be said that they are mainly linked to the social dimensions of TBL (community, education, health or poverty).

The process of social innovation can be defined along the lines of input, output and impact factors, as is the case for the systemic nature of innovation. The methods associated with each stage of the process are illustrated by the chronological line of social innovation (Figure 1).

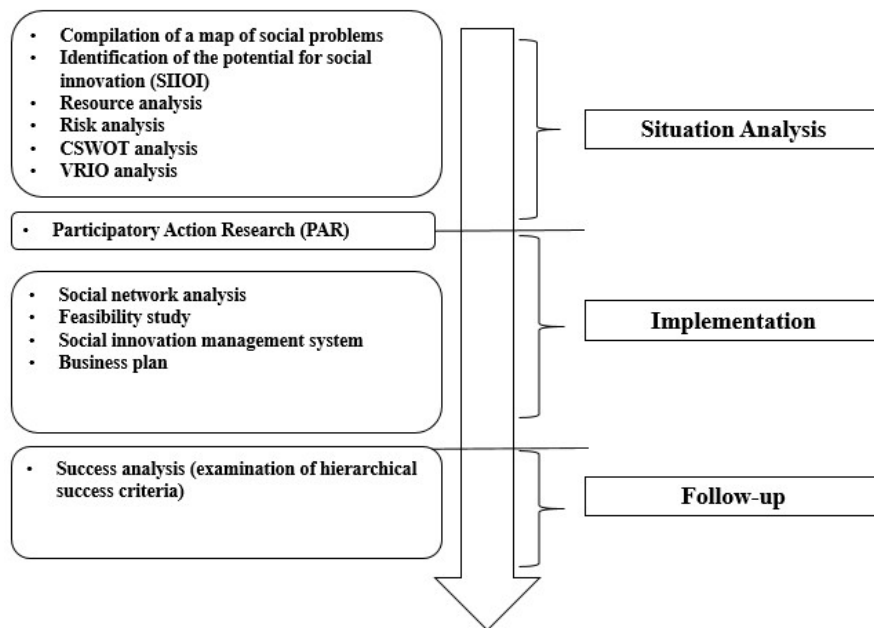


Figure 1 Chronological line of social innovation

Source: Author's own elaboration (based on Veresné Somosi, Varga, 2021).

#### 4. RESULTS

Regarding the methodologies assigned to the stages of the social innovation process, a relationship matrix can be defined (Table 2), which can be used to characterise the almost all the research methods that can be recommended for their application (Veresné Somosi, Varga, 2021).

Table 2. Methodologies assigned to the stages of the social innovation process

Methods/ Interpretation range of application		Aim	Region/ county	Municipa- lity	Operating organiza- tion	Start-up organiza- tion	Project, program
1		2	3	4	5	6	7
<b>SITUA- TION ANALYSIS</b>	<b>Compilation of a map of social problems</b>	Compilation of a structured information market as an adaptation of the METAPLAN method.	X	X	X		
	<b>Identificatio n of the potential for social innovation</b>	Determining the input, transformation and output factors characterizing social innovation.	X	X	X		
	<b>Resource analysis</b>	What effect do the individual elements of the organization, and their relationships have on competitiveness and sustainability.	X	X	X	X	X
	<b>Risk analysis</b>	Identifying sources of danger and determining the negative consequences of the occurrence of a source of danger.	X	X	X	X	X
	<b>SWOT analysis</b>	Structured analysis of internal capabilities and external environment.	X	X	X	X	
	<b>VRIO analysis</b>	Determining the compe- tencies of the examined unit.	X	X	X		
<b>PARTICIPATORY ACTION RESEARCH (PAR)</b>		It combines different knowledge and experien- ces with cooperative learning.		X			

Table 2 (cont.). Methodologies assigned to the stages of the social innovation process

1	2	3	4	5	6	7	
<b>IMPLEMENTATION</b>	<b>Network analysis</b>	Establishing a methodological framework model to map the pattern of social innovation processes and organizations.	X	X	X		
	<b>Feasibility study</b>	Decision support to help choosing between different options; providing adequate information to decision-makers on the financing, acceptance, modification or rejection of the proposed solution.					X
	<b>Social Innovation Management System</b>	Providing a sector-neutral, innovation-based innovation management methodology that can be used in practice.			X	X	
	<b>Business Plan</b>	In the case of an operating organization, the service of preparing the strategy; in the case of start-ups, the concretisation of the business concept and the creation of financing conditions.			X	X	
<b>FOLLOW-UP</b>	<b>Success verification</b>	Measuring the success of the social innovation process.	X	X	X	X	X

Source: Author's own elaboration (based on Veresné Somosi, Varga, 2021).

This creates the possibility of developing the methodological combinations that can most effectively support the development and implementation of social innovation and the assessment of the social innovation impact.

The reference objects for the application of the methods are different: region/county, municipality, operating organization, start-up organization, project/program.

The social innovation impact assessment, which determines the success of the initiative, is linked to the third (final) stage of the social innovation process (the follow-up assessment). The assessment of success is based on the evaluation of hierarchical success criteria. The main objective of the method is to measure the success of the social innovation process, which is a complex task. In defining the measurement structure, in addition to the quantitative elements, particular attention should be paid to the range of qualitative elements that are difficult to quantify. The constant increase in the number of societal challenges requiring long-term solutions and the dynamic changes in environmental factors require the promotion of innovative collaborations and the acceleration of the implementation of social innovation processes. The combined effect of these effects may be to increase the failure rate of initiatives.

## 5. DISCUSSION

To reduce or prevent failure, it is necessary to identify the factors and interactions between them that contribute to the success of the social innovation process. Determining the success of the social innovation process, as in the measurement used in the project management approach, requires the identification of key success criteria. As an initial step, it is necessary to identify the main factors contributing to potential failure, which can be seen as significant overruns in time and budget. These characteristics can be clearly quantified and identified as success factors. However, there is also a strong emphasis on the substantive interpretation of the success of the social innovation process, where the time and cost parameters outlined above are complemented by a qualitative assessment of the outcome of the initiative. The time and cost parameters, as well as the quality of the outcome of the endeavor, can be identified as success criteria of the social innovation process. However, in addition to these criteria, other criteria play a key role in judging success, mainly in terms of the benefits for the initiator or the stakeholders of the endeavor. To interpret success, a hierarchical model (Görög, 1996), which also measures the success of projects, can be proposed, in which the success of the social innovation process is judged at three levels:

- time, cost and quality,
- evaluation based on the satisfaction of the initiator of the endeavor,
- the satisfaction of those involved in the initiative.

The first level of evaluation in the hierarchical model (Figure 2) can be based on quantifiable results. The second level of measurement is for social innovation efforts that are difficult to quantify, where success can only be measured over a longer period and often indirectly. The third level is defined in the context of an evaluation process to determine the extent to which the initiative is being implemented and accepted by stakeholders. For this evaluation, it is useful to separate the stakeholders of the individual and/or group initiating the endeavour from the other stakeholders of the endeavour.



Figure 2. Understanding the success criteria of the social innovation process

Source: Author's own elaboration (based on Görög, 1996).

The hierarchical model for assessing the success of the social innovation process consists of a set of conditional levels but also allows for independent judgements of success at each level. This feature of the model offers several possibilities as follows (Daróczy, 2011):

- a priority order of success criteria can be established, which can only be determined by knowing the specific situation,
- the participants in the social innovation endeavour and those involved in the endeavour can assess the degree of success at a level appropriate to them.

Initiatives may have different perceptions of success and therefore there are often contradictions between success criteria, which makes it difficult to prioritise success criteria and reach an appropriate compromise. It should also be borne in mind that perceived success may change over time.

## 6. CONCLUSIONS

The paper describes the measurement methods of the social innovation process, their limitations and their potential for adaptation. The measurement methods of social innovation focus mainly on the measurement of social innovation processes at the macro level. Based on the indicators used in the measurement methods at local, regional and national level, a set of indicators can be developed which can be defined as the lowest common multiple of the different territorial levels. The quantity, type and weighting of the indicators used to measure processes at different levels can be determined according to the data that can be interpreted and made available at that level. The social innovation impact, as the final stage of the process, can be measured using a variety of methods, but the aim is to continuously refine and improve the methods. Because of the difficulties and limitations of quantifying indicators, we are talking about assessing the impact of social innovation, not measuring it. Impact assessment implies a continuous, long-term observation, a continuous collection of results, and the interpretation of these results within the timeframe set can provide inputs on how to assess the positive impact. The impact of the social innovation process can be measured by looking at the social, financial and environmental impacts (e.g. per capita income, educational attainment, number of long-term residential care facilities) generated by the initiatives. The evaluation process of the social innovation impact will assess the extent to which the initiative has been accepted by stakeholders during its implementation and how the impact of the social innovation initiative can be quantified. The analysis of the applicability of the results is also of particular importance in the economic development decision-making processes of each territorial unit.

### Acknowledgement

*Supported by the University Research Scholarship Program of the Ministry For Culture And Innovation from the Source of the National Research, Development and Innovation Fund.*

## REFERENCES

- Balaton, K., Varga, K. (2017). Social innovation and competitiveness – a literature review of the theoretical work in the field. *REVIEW of Economic Studies and Research Virgil Madgearu*, 10(2), 27–42. <https://doi.org/10.24193/RVM.2017.10.08>

- Battilana, J., Casciaro, T. (2012). Change Agents, Networks, and Institutions: A Contingency Theory of Organizational Change. *Academy of Management Journal* 55(2), 2–41. <https://doi.org/10.5465/amj.2009.0891>
- Benedek, J., Kocziszky, Gy., Veresné Somosi, M., Balaton, K. (2015). Regionális társadalmi innováció generálása szakértői rendszer segítségével. [Generating regional social innovation through an expert system]. *Észak-magyarországi Stratégiai Füzetek [North Hungary Strategy Papers]* 12(2). Retrieved from: [https://www.strategiaifuzetek.hu/files/322/4\\_2015-2strat\\_fuzetek\\_2015\\_2.pdf](https://www.strategiaifuzetek.hu/files/322/4_2015-2strat_fuzetek_2015_2.pdf), 25.11.2024.
- Cajaiba-Santana, G. (2014). Social innovation: Moving the field forward. A conceptual framework. *Technological Forecasting and Social Change*, 82, 42–51. <https://doi.org/10.1016/j.techfore.2013.05.008>
- Carvache-Franco, O., Candela, G. G., Barreno, E. Z. (2018). The Key Factors in Social Innovation Projects. *Mediterranean Journal of Social Sciences*, 9(5), 107–116. <https://doi.org/10.2478/mjss-2018-0142>
- Dainienė, R., Dagilienė, L. (2016). Measurement of Social Innovation at Organisation's Level: Theoretical Issues. *Economics and Business* 29(1), 96–103. <https://doi.org/10.1515/eb-2016-0027>
- Daróczy, I. (2011). *Projektmenedzsment [Project management]*. Szent István Egyetem, Gödöllő.
- Dawson, P. M., Daniel, L. (2010). Understanding social innovation: a provisional framework. *International Journal of Technology Management*, 51(1), 9–12. <https://doi.org/10.1504/IJTM.2010.033125>
- Döringer, S. (2017). *Is Social Innovation a Key to "De-Peripheralization"? Dealing with Challenges of Peripheralization on a Local Level*. Retrieved from: <http://epub.oeaw.ac.at/Oxc1aa5576%20x0039109b.pdf>, 28.12.2024.
- Elkington, J. (1997). *Cannibals with Forks: The Triple Bottom Line of 21st Century Business*. Oxford, Capstone.
- Görög, M. (1996). *Bevezetés a projektmenedzsmentbe [Introduction to project management]*. Aula Kiadó, Budapest.
- Grassl, W. (2012). Business Models of Social Enterprise: A Design Approach to Hybridity. *ACRN Journal of Entrepreneurship Perspectives*, 1(1), 37–60. Retrieved from: [http://www.acrn.eu/resources/Journals/JoE012012/Grassl\\_SE-Hybridity.pdf](http://www.acrn.eu/resources/Journals/JoE012012/Grassl_SE-Hybridity.pdf), 30.11.2024.
- Hochgerner, J. (1999). *Jenseits der grossen Transformation. Arbeit, Technik und Wissen in der Informationsgesellschaft [Beyond the great transformation. Labour, technology and knowledge in the information society]*. Löcker, Vienna.
- Hubbard, G. (2009). Measuring Organizational Performance: Beyond the Triple Bottom Line. *Business Strategy and the Environment*, 18(3), 177–191. <https://doi.org/10.1002/bse.564>
- Kleverbeck, M., Krlev, G., Mildenerberger, G., Strambach, S., Thurmann, J-F., Terstriep, J., Wloka, L. (2019). Indicators for Measuring Social Innovation. In J. Howaldt. et al. (Eds.), *Atlas of Social Innovation – 2nd Volume: A World of New Practices* (pp. 98–101.) Oekom Verlag GmbH, <https://doi.org/10.14512/9783962386887>
- Krlev, G., Bund, E., Mildenerberger, G. (2014). Measuring What Matters – Indicators of Social Innovativeness on the National Level. *Information Systems Management*, 31(3), 200–224. <https://doi.org/10.1080/10580530.2014.923265>
- Mulgan, G., Tucker, S., Ali, R., Sanders, B. (2007). *Social Innovation – what it is, why it matters and how it can be accelerated*. The Young Foundation. University of Oxford. London.
- Neumeier, S. (2017). Social innovation in rural development: identifying the key factors of success. *The Geographical Journal*, 183(1), 34–46. <https://doi.org/10.1111/geoj.12180>

- Slaper, T. F., Hall, T. J. (2011). The Triple Bottom Line: What Is It and How does It Work? *Indiana Business Review*, 86(1), 4–8. Retrieved from: <https://www.ibrc.indiana.edu/ibr/2011/spring/article2.html>, 25.11.2024.
- Szendi, D. (2018). A társadalmi innovációs potenciál mérésének lokális szintű lehetőségei. [Possibilities for measuring social innovation potential at local level]. *Erdélyi Társadalom [Transylvanian Society]*, 16(1), 31–58. <https://doi.org/10.17177/77171.207>
- Unceta, A., Castro Spila, J., Garcia Fronti, J. (2016). Social innovation indicators. *Innovation: The European Journal of Social Science Research*, 29(2), 1–13. <https://doi.org/10.1080/13511610.2015.1127137>
- Varga, K., Tóth, G. (2024). Social innovation initiatives of NGOs in a Hungarian disadvantaged area. *Észak-magyarországi Stratégiai Füzetek [North Hungary Strategy Papers]*. 21(01), 115–126. <https://doi.org/10.32976/stratfuz.2024.9>
- Varga, K., Veresné Somosi, M., Tóth, G. (2023). Cluster Analysis of Competitive Advantage in Hungarian Settlements Based on their Social Innovation Potential. *Pakistan Journal of Life and Social Sciences* 21(1), 345–359. <https://doi.org/10.57239/PJLSS-2023-21.1.0027>
- Veresné Somosi, M., Varga, K. (2021). *Conceptualisation as a tool in understanding social innovation – Methods, case studies, practices*. University of Miskolc, Faculty of Economics.