

# SIMPACT PROJECT REPORT

Report **#D5.1**

## **Improved Measurement of the Economics of Social Innovation**

René Wintjes<sup>a</sup>, Nordine Es-Sadki<sup>a</sup>, Rüdiger Glott<sup>a</sup>, Ad Notten<sup>a</sup>

<sup>a</sup> Maastricht University, MERIT

March 2016

## Acknowledgements

We would like to thank Minna Kanerva, Hugo Hollanders and others who have provided inputs or comments to drafts, and Anna Berlina, Leneisja Jungsberg, Maria Kleverbeck, Tamami Komatsu, Liisa Perjo, Saeed Saman and Judith Terstriep for their support with the survey of SIMPACT case studies.

## SIMPACT

SIMPACT is a research project funded under the European Commission's 7th Framework Programme from 2014-2016 and is the acronym for «Boosting the Impact of SI in Europe through Economic Underpinnings». The project consortium consists of twelve European research institutions and is led by the Institute for Work and Technology of the Westphalian University Gelsenkirchen in Germany.

## Legal Notice

The information and views set out in this report are the sole responsibility of the author(s) and do not necessarily reflect the views of the European Commission.

## Document Properties

---

<b>Project Acronym</b>	SIMPACT
<b>Project Title</b>	Boosting the Impact of Social Innovation in Europe through Economic Underpinnings
<b>Coordinator</b>	Institute for Work & Technology of Westphalian University Gelsenkirchen
<b>Deliverable D5.1</b>	Improved Measurement of the Economics of Social Innovation
<b>Author(s)</b>	René Wintjes , Nordine Es-Sadki, Rüdiger Glott, Ad Notten
<b>Document Identifier</b>	FP7-SSH.2013.1.1-1-613411-SIMPACT – D5.1
<b>Work Package</b>	WP5 Measuring the Economics of Social Innovation
<b>Date</b>	11 April 2016

---



The SIMPACT project receives funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under Grant Agreement No: 613411.

## Table of Contents

<b>1 EXECUTIVE SUMMARY</b>	<b>1</b>
<b>2 DELIVERABLE STRUCTURE</b>	<b>4</b>
<b>3 DEFINING SOCIAL INNOVATION &amp; ITS ECONOMIC UNDERPINNING</b>	<b>5</b>
3.1 Defining Social Innovation	5
3.1.1 Social Innovation in the Literature	5
3.1.2 Semantic Analysis	7
3.2 SIMPACT's Conceptual Framework	8
3.3 Towards an Economic Framework of SI	10
3.3.1 Investment by Firms in Intangibles & its Economic Impact	11
3.3.2 Additional Intangibles & Innovations in the Public & Civic Sector	14
3.3.3 Use Value & Value Co-Creation in a Systemic Service-logic of SI	23
3.4 What to Measure or Indicate?	27
<b>4 INDICATORS ON SOCIAL INNOVATION</b>	<b>30</b>
4.1 Social Innovation Measurement	30
4.2 Information & Data for SI Metrics	32
4.3 Micro-level of SI, Innovators, Beneficiaries & Initiatives	33
4.4 Macro-level of Regions & Countries	39
4.5 Suggested Indicator Sets	42
<b>5 EVALUATION AND IMPACT ASSESSMENT OF SOCIAL INNOVATION</b>	<b>57</b>
5.1 SI Impact Measurement Tools & Methods	57
5.1.1 Social Accounting & Auditing (SAA)	58
5.1.2 Social Return on Investments (SROI)	60
5.1.3 Other Social Impact Measurement Approaches	61

5.2	Usage of Formal Evaluation & Assessment Tools for Measuring Economic & Social Impact	63
5.3	Why evaluate & assess Impact?	66
5.4	Light, informal & theory-based Impact Evaluations	68
<b>6</b>	<b>MEASUREMENT GAP ANALYSIS: WHAT IS LACKING?</b>	<b>75</b>
6.1	Gaps in Measurement of SI	75
6.2	Gaps in the Measurement of the SIs Impact	76
<b>7</b>	<b>INDICATOR-BASED PROFILING OF SI AT MICRO LEVEL OF SIMPACT CASE STUDIES</b>	<b>78</b>
7.1	Survey of SIMPACT Case Studies	78
7.2	Explorative Methodology: Categorisation by Principal Component Analysis	83
7.3	Results of Factor Analysis	86
7.4	Indicator Application in full SI Profiles at Micro Level	95
<b>8</b>	<b>INDICATOR BASED PROFILING OF SOCIAL INNOVATION AT THE LEVEL OF EUROPEAN REGIONS</b>	<b>99</b>
8.1	Regional Data	99
8.2	Explorative Methodology: Categorisation of EU Regions on SI Components by PCA	100
8.3	Results of the Factor Analysis	103
8.4	Results of the Regression Analyses: Impact on GDP and beyond	107
8.5	Results of Cluster Analysis & Application of Regional SI Profiles	111
8.6	Micro-SI-Profiles per Type of regional SI Profile	115
<b>9</b>	<b>CONCLUSIONS</b>	<b>117</b>
	<b>References</b>	<b>120</b>
	<b>Appendix</b>	<b>127</b>

## Figures

Figure 1.	Instances of unique words and phrases used in social innovation research	7
Figure 2.	Schumpeter types of innovation	13
Figure 3.	TEPSIE's Integrated model for measuring SI	14
Figure 4.	Civic activism and inclusion in relation to economic growth	15
Figure 5.	Categorisation of aggregated social innovativeness*	17
Figure 6.	Key allocation mechanisms in the three economic domains	19
Figure 7.	The Economic framework of SI	20
Figure 8.	Value co-creation in a service-systems perspective	24
Figure 9.	Conceptual framework of SI as value creation	26
Figure 10.	The Creating Social Value Space	28
Figure 11.	Social impact investment market framework.	29
Figure 12.	Philanthropic evidence chart	59
Figure 13.	The EU consumer market scoreboard (EU, 2015c)	64
Figure 14.	Mapping of impact tools	65
Figure 15.	Impact Chain of the Social Reporting Standard	68
Figure 16.	Typical Structure of a Logframe Matrix	72
Figure 17.	Strengths and Common Problems with the Application of the LFA	72
Figure 18.	SI input profiles by geographical scale	88
Figure 19.	SI input profiles by theme	88
Figure 20.	SI input profile for NGOs & for innovators with a long-term outlook rated as very positive	89
Figure 21.	Outcome profile for regional and national and local SI scale	92
Figure 22.	Outcome profile by theme, main funder, type of SI, and SI with very positive long-term perspective	93
Figure 23.	SI profile by scale of implementation and theme of SI	97
Figure 24.	SI profiles by type of SI, and long-term outlook, based on average factor scores	98
Figure 25.	Regional score on 'Governance vs. civil'	106
Figure 26.	Regional scores on 'Unemployment'	106
Figure 27.	Regional scores on 'Trust in State & new ideas'	107
Figure 28.	Regional scores on 'Failing education'	107
Figure 29.	Scree plot with eigenvalue curve	108
Figure 30.	P-P plots for Regional Human Development Index and Regional GDP per capita	108
Figure 31.	Regressions for regional SI Factor 1: 'Governance vs. Civil' with Regional HDI (left) and GDP (right) as dependent variables	109

Figure 32.	Regressions for regional SI Factor 2: 'Unemployment' with Regional HDI (left) and GDP (right) as dependent variables	109
Figure 33.	Regressions for regional SI Factor 3: 'Trust in State & new ideas' with Regional HDI (left) and GDP (right) as dependent variables	110
Figure 34.	Regressions for regional SI Factor 4: 'Failing Education' with Regional HDI (left) and GDP (right) as dependent variables	111
Figure 35.	Regressions for regional SI Factor 5: 'Engagement' with Regional HDI (left) and GDP (right) as dependent variables	111
Figure 36.	Four types of SI regions in Europe	112
Figure 37.	Macro SI profiles for the four types of SI regions in Europe	113
Figure 38.	Average macro SI profiles for selected cases by theme of SI	114
Figure 40.	Macro SI profiles for selected cases by long-term outlook of the SI	115
Figure 41.	Micro SI profile per type of region	115
Figure 41.	Micro input, output, and full SI profile for cases per type of region	116

## Tables

Table 1.	Top 25 words and phrases	8
Table 2.	Top 10 countries researching social innovation	8
Table 3.	A categorisation of SI Components, Objectives & Principles	9
Table 4.	Classification of functions of government (COFOG)	16
Table 5.	Exchange value in Good-Dominant logic vs. Use-value in Service-Dominant logic on value creation.	23
Table 6.	Foundational premises of service-dominant logic	25
Table 7.	A needs-solutions measurement framework	33
Table 8.	Paid employees and volunteers as a share of third sector workforce (FTE), in %	40
Table 9.	TEPSIE Structure of the blueprint of SI indicators	41
Table 10.	A categorisation of Social Innovation components, objectives and principles, and possible metrics (using existing data sources)	44
Table 11.	Macro-level (national and regional) Indicator set for SI, with EU data sources	47
Table 12.	Indicators on tangible or monetisable aspects of SI in a use table, an indicative input-output exercise on SI enablers and SI beneficiaries.	50
Table 13.	Main survey questions addressed by the SI cases of SIMPACT	53
Table 14.	The combined sets of micro- and macro-level of indicators for SI, for intangible and tangible aspects	54
Table 15.	Formal and informal learning from evaluation	67
Table 16.	Survey questions and code used in database and graphs	79
Table 17.	Overview of studies identifying firm level innovation modes	83
Table 18.	Hierarchical factor analysis (2nd stage) on ingredients of firm innovation strategies: 4 modes	85
Table 19.	Types of resources /inputs to SI, pattern matrix of factor analysis	87
Table 20.	Two types of SI objectives, pattern matrix of factor analysis	90
Table 21.	Type of SI obstacles, pattern matrix of factor analysis	90
Table 22.	Types of SI output/outcome, pattern matrix of factor analysis	91
Table 23.	Five components of SI; pattern matrix of factor analysis	95
Table 24.	Sample of variables in the database	101
Table 25.	Factor analysis on regional indicators: five SI components, pattern matrix	103

This page is intentionally left blank.



# 1 EXECUTIVE SUMMARY

This report on improved measurement of the economics of SI synthesises the results of Tasks 5.2 and 5.3 of work package 5 of SIMPACT. It outlines the final sets of developed indicators and exemplifies their application by means of indicator types and the analysis of SI economics for different categories of the SIMPACT cases of Social Innovation (the case studies of WP3) as well as the different categories of national and regional contexts for SI.

We conclude that social innovation has many aspects, and is an even broader societal concept than other forms of innovation, such as the more traditional technological, and for-profit innovations. Besides a conceptual broadening, also the metrics and measurement approaches need to incorporate a broader perspective, by specifically including the public sector, the social or third sector, and the private sector, since social innovation deals about the new combinations of resources and capabilities from these sectors. A broad range of resources and capabilities of these different sectors serve as input to the social innovations. In addition, the objectives, and the benefits and impacts from the social innovations differ for each of these three sectors. Measuring social innovation therefore involves capturing these aspects for the various sectors. For measuring social innovation or the measurement of its economic impacts, it is not enough to limit the indicators to only one or two of these three economic sectors.

We can conclude that the value or impact of social innovations derive from the interaction between the supply and demand for social innovations. Therefore, indicator sets need to include both indicators for the demand, or for the needs for social innovations, as well as indicators for the potential to supply solutions. The interaction between the demand and supply-side of social innovation as the economic underpinning of social innovation is not mediated by prices on markets for exchange value. As with other kinds of innovations the producers and users of innovations have to engage in interactive learning, which involves communicating tacit knowledge and discussions of intangibles and use value among collaborating partners.

Regarding the measurement of SI at micro level it is relevant to capture various inputs, outputs, objectives and obstacles. The importance of certain inputs differs by for instance the type of main funder, the theme of SI, and the scale of operations. Social innovations at local scale have on average a lower number of actors and cooperation, and a lower degree of diversity of knowledge than social innovations which operate at national level. These two input-factors (a large number of actors

**Social innovation -  
a multifaceted phenomenon**

**Value & impact of social innovation**

**Measurement at micro-level**

and partners, and diversity of knowledge) are also characteristic for the social innovations which have a very positive long-term perspective. ICT seems a more important source of input for SI in the theme of Demographics and Education, than for social innovations in the theme of Employment. ICT investments seem also more common among social innovations which are implemented at national scale (compared to those implemented at local scale). On the other hand, for SI in the theme of Employment, knowledge is a relatively important input.

#### Complexity of business & organisational models

It is difficult for innovators to combine in one social innovation the two objectives of seizing business opportunities and increasing public values which do not benefit the marginalised target group directly (e.g.: social cohesion, inclusion, lobbying). The co-rated importance of organisational and legal obstacles confirms the importance of the hybrid issue for social innovators concerning the problem to find the appropriate legal form of organisation for their activities.

The concentration of social, financial and political obstacles for certain social innovations seems to serve as an identification of radical social innovations.

#### Economic outputs & benefits

Several types of economic output can be identified: economic outcomes for the innovator, economic outcomes for the target group, and benefits in terms of public budget. Other social benefits cannot directly, be translated into economic benefits, or it would take a much longer time to materialise.

#### Economic benefits for the innovator & target groups

Social innovations which are implemented at local scale have a high economic impact for the target group and the public budget, but the impacts for the innovator are relatively small compared to social innovations which are implemented at national level. SIs implemented at national scale have on average less impact on public budget and lower rated economic impacts for the target group, but the business economic impacts for the innovators are rated higher. Social innovations in the theme of «*Employment*» are characterised by on average high economic impacts for the target group. Social innovations that are *product/service innovations* do well on the economic impacts for the innovators. SIs which involve addressing a new target group do very well on all impact fields, except economic impacts for the innovator. In order to improve their long-term perspective, policy makers should therefore invest in the business capabilities of these social innovators (without applying further output related objectives concerning benefits for the marginalised target group).

#### Complementarity in impacts from empowering innovator & target groups

Social innovations that have a very positive long-term perspective, have above average scores on impacts for the innovator, but also for social as well as economic benefits for the target group. The more general policy implication is that policy makers, who want to increase the long-term economic impact from social innova-

tion, should not merely focus on output in terms of empowerment of the marginalised target group, but should also invest in the empowerment and long-term perspective of the social innovators.

Based on a large set of regional statistics with relevance to social innovation, we can conclude that the regional situation concerning social innovation differs within Europe, and not all differences can be reduced to differences between countries.

Distinct regional & European pictures

The identified regional SI factors are both related to differences in regional GDP as well as regional Human Development Index, an index which can be seen as an output indicator to measure the impact of SI beyond GDP.

Four different types of social innovation regions (or regional eco-systems) within the EU are identified. The first group or cluster of regions with similar social innovation characteristics, are characterised by the high score on the SI factor, which we have labelled '*Failing education*'. The second group of regions are characterised by high scores on the SI factors: '*Governance vs. civil*', and '*Engagement*'.

Regional SI ecosystems

The SIMPACT cases in the first type of region do well on economic impact for the target group. The SIMPACT cases in the second type of region have rather disappointing impacts for the target group. Knowledge is a more important input factor for the SIMPACT cases in the first type of region, compared to those in the second type of regions.

SIMPACT social innovations with a very positive long-term outlook are especially to be found in regions, which have high scores on the SI factor 'unemployment', and where life-long-learning type of social innovations seems to serve the marginalised target groups as well as their regional economies.

## 2 DELIVERABLE STRUCTURE

As stated in the DoW, this report synthesises the results of Tasks 5.2 and 5.3 of work package 5 of SIMPACT. It outlines the final sets of developed indicators and exemplifies their application by means of indicator types and the analysis of SI economics for different categories of SIMPACT cases of Social Innovation (the case-studies of WP3) as well as the different categories of national and regional contexts for SI.

The deliverable also includes results of tasks 5.1, since it starts with defining social innovation and its economic underpinning in chapter 3, where we start with a review and semantic analysis of social innovation in the literature. The conceptual start is a short summary of SIMPACT's conceptual framework of SI Components, Objectives and Principles in paragraph 3.2. The next paragraph develops an economic framework of SI by emphasising the importance of investments in intangibles and the civil sector, as a third economic sector, next to the private and public sector.

Chapter 4 addresses indicators of social innovation at the micro level of social innovations and the macro level of countries and regions. This chapter results in suggestions for indicator sets at both levels in paragraph 4.5 and these suggestions are presented in different forms. Chapter 5 discusses a selection of tools for evaluation and impact assessment of social innovation. Since there is no single best practice tool, it is important to consider the objective of the evaluation and the costs. Chapter 6 identifies the gaps in measurement of SI, as well as the gaps in measurement of the impacts of social innovation. In chapter 7 the analysis of the survey of 55 SIMPACT cases of social innovation is presented. Based on the results, indicators-based profiles at this micro level of SI is provided for types of SI. The indicators allow to characterise SI inputs, objectives, obstacles, and outcomes for various groups of cases. Chapter 8 presents the results of the application of the indicator sets at the regional level. With the use of factor analysis, the collected regional statistical data is reduced into regional SI factors. We test if these regional SI factors have an impact on GDP and beyond. Conclusions are drawn in chapter 10.

In addition, a working paper on an organisational approach to measuring social innovation, i.e. «Social Innovation Regimes» and suggests indicators and a method to apply them in order to make the concept of SI regime operational has been elaborated (Castro Spila, Luna & Unceta, 2016).

## 3 DEFINING SOCIAL INNOVATION & ITS ECONOMIC UNDERPINNING

### 3.1 Defining Social Innovation

The working definition of Social Innovation (SI) within the SIMPACT project is set out by Rehfeld and colleagues (2015) as:

*“Social Innovation refers to novel combinations of ideas and distinct forms of collaboration that transcend established institutional contexts with the effect of empowering and (re)engaging vulnerable groups either in the process of social innovation or as a result of it.” (Rehfeld et al. 2015: 6)*

Reaching back to the theories that Schumpeter (1912) formulated on economic development, and the role of innovation in this development process, and by drawing on the subsequently formalised evolutionary theory (Nelson & Winter, 1982; Dosi, 1982) we can understand “social innovation as an evolutionary process” which “comprises the development, implementation, practical application, and consolidation of such novel combinations” (Rehfeld et al. 2015: 7). This theoretical basis enables us to translate economic development into social development and to introduce, further on, a categorisation of the roles that innovation plays in the social sphere e.g. society.

#### 3.1.1 Social Innovation in the Literature

A generalisable and commonly agreed definition of social innovation has proven to be rather elusive due to complex nature of society itself and the parts of society in which social innovation could play a role.

If we survey the literature (Howaldt et al., 2014; Caullier-Grice et al., 2012) on social innovation, and make an inventory of the different definitions or descriptions of what authors think makes up social innovation, we find that there is a rather broad understanding of social innovation indeed based on Schumpeter’s original ideas. Although broad, continuously present in almost each of the definitions are the concepts of welfare and social exclusion/inclusion. We find that Pol and Ville (2008, 2009) and Serat (2012) find the concept of social innovation is too vague and nothing more than a hype. A barrier to an understanding of social innovation is the relatively underdeveloped nature of research into the area itself, which has

received little attention so far. However, the first mentioned authors, as well as Heiskala (2007) and Etorre and colleagues (2013), also underline that an innovation can be termed “social” if it has the potential to change and improve the quality and quantity of life (e.g. welfare) in a society by addressing social needs and affecting positive changes in the social structure.

Benneworth and Cunha (2015) remark that there seems to be a general awareness that the above description is of universal value as the European Commission underlines the need for a sustainable and inclusive society in its Europe 2020 strategy affected through policy interventions in, among others, “employment, innovation, education, social inclusion and climate/energy” (EC, 2013). They furthermore point out that the formulated “Grand Societal Challenges” cannot be solved by economic development alone. Action by key actors is required to address social exclusion and marginalisation of communities which are shut out of “different kinds of markets for public services, including housing, health, education, employment and transport” (Benneworth, 2013). These communities of marginalised people, living a precarious existence and sometimes termed “*the precariat*” (Standing, 2011), are facing a market failure for their “proletarian class-in-itself”, and a lock-in into this economic and societal failure which demands changes in the existing social structures (Garud and Karnoe, 2013, Mieg and Töpfer, 2013).

From the above we can refine our earlier generalisable description to incorporate three key characteristics:

1. The innovation creates or has societal problem-solving capabilities or capacities
2. The innovation involves building and organising networks and structures (coalitions) between key actors facilitating new ways of working or new forms of action.
3. The innovation is scalable to other contexts.

Moulaert and Sekia (2003) add a prerequisite to these three characteristics in that the social innovator must be embedded within the local social life/society, emphasising the importance of the “territorial” (e.g. micro) context of the problems, caused by economic and social failure, and faced by the precariat actors on one end and the institutional actors on the other. The relevance of this embeddedness of the social innovators, and their innovations, can also be seen in Table 3 of the paper by Turkeli and Wintjes (2014) where we can fit social innovation into the regional, but foremost into the local system of innovation context.

### 3.1.2 Semantic Analysis

A confirmation of the description of social innovation and of the aspects of social innovation highlighted in the previous section can be found in the following semantic analysis of the research done on social innovation in the years 1966 to 2015.

In total, we retrieved a number 1234 documents presenting studies on, or referring to, social innovation. This data we retrieved from the Scopus citation index using a query focusing on keywords such “social innovation”, “society”, “innovativeness” etc. Furthermore, we employed data-mining techniques to gauge the direction that the research in the field is taking. Semantic as well as geographic indicators can be harvested, analysed and visualised.

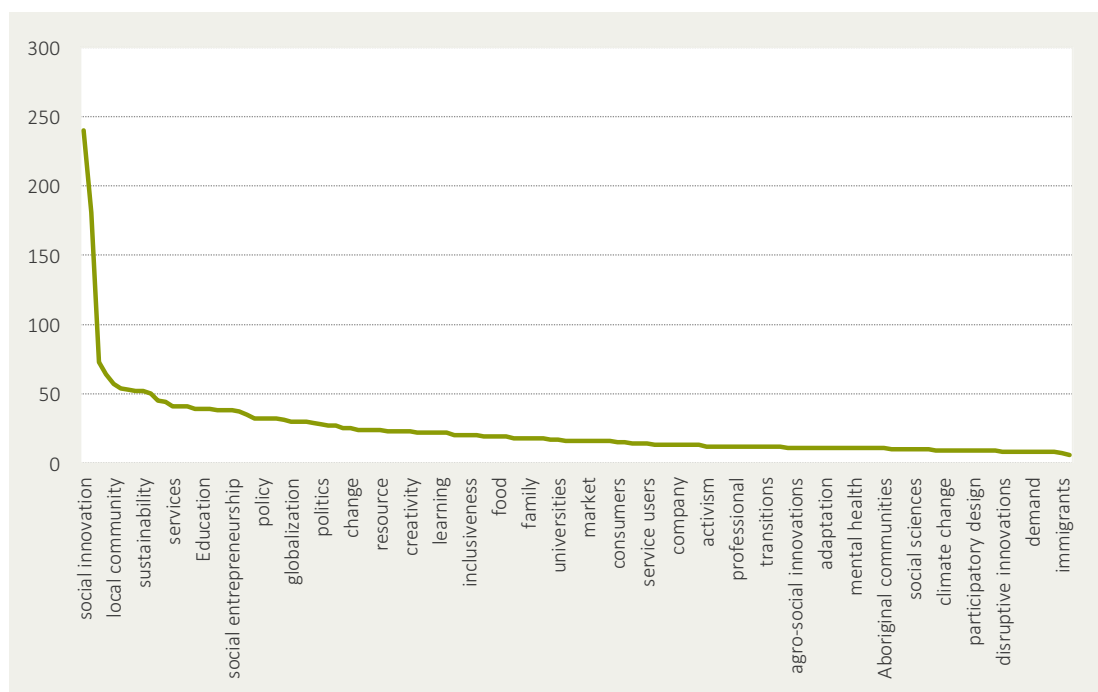


Figure 1. Instances of unique words and phrases used in social innovation research

In Figure 1, we show the unique words and phrases used in social innovation research, arranging them by the number of instances they appear in the abstract of the research papers in question. We find that apart from the social innovation phrase, which is less often used as such than anticipated, a large number of terms are found that support the descriptive and exploratory review presented earlier. If we now look specifically at the top 25 terms and phrases (Table 1) we indeed see community and society related terminology featuring in the top 12, while the somewhat more actor and market related terms and phrases make up the remainder of this listing. These outcomes point to the relevance of social innovation as a concept and to social innovators as important agents of change in society at large and local communities on a more micro, “territorial”, level.

Words & phrases from the abstracts	Instances	Words & phrases from the abstracts	Instances
social innovation	240	Education	39
innovation	181	environment	39
community	73	technologies	39
developed	64	knowledge	38
local community	57	government	38
social dimension	52	social entrepreneurship	38
public sphere	54	working	32
health	53	policy	32
sustainability	52	science	32
social inclusion	50	globalisation	30
society	45	future	29
services	41	opportunity	27
economics	41		

Table 1. Top 25 words and phrases

Furthermore, diverging to geographic indicators of SI research, we see in Table 2 the top 10 countries engaged in social innovation research, of which 60% are EU member states.

Country*	Number of papers	Country*	Number of papers
United Kingdom	153	Germany	52
United States	110	Spain	50
Canada	67	France	39
Italy	59	Japan	37
Australia	57	Netherlands	32

Table 2. Top 10 countries researching social innovation (\*as derived from author address)

### 3.2 SIMPACT's Conceptual Framework

In Table 3 we have synthesized SIMPACT's conceptual framework of Social Innovation components, objectives and principles. As Rehfeld and colleagues (2015) conclude, it is apparent from the categorisation of Social Innovation as presented in



table 3, and the elements that make up this categorisation, that the interactions between the different categories are dynamic and mutually influencing and “drive social innovations’ economic and social impact” (Rehfeld et al. 2015: 44).

SIMPACT investigates the economic foundation of Social Innovation, it’s economic under-pinning. In the next paragraph we therefore focus on the economic framework.

	Social	Economic	Political
<b>Social Innovation Components</b>			
<b>Types of SI Actors</b>	<ul style="list-style-type: none"> <li>- Informal: e.g. citizens initiating civil society projects, crowds, foundations</li> <li>- Formal: NGOs, associations</li> </ul>	<ul style="list-style-type: none"> <li>- Social entrepreneurs;</li> <li>- For-profit-companies</li> <li>- Public enterprises</li> <li>- PPPs</li> </ul>	<ul style="list-style-type: none"> <li>- Political decision makers at: Local, regional, national, European, global level</li> </ul>
<b>SI Resources</b>	<ul style="list-style-type: none"> <li>- Education</li> <li>- Social /relational capital</li> <li>- Means of protest /leadership</li> </ul>	<ul style="list-style-type: none"> <li>- Production factors: labour, capital, land, knowledge</li> </ul>	<ul style="list-style-type: none"> <li>- Right to vote;</li> <li>- Social &amp; human rights;</li> <li>- Ideologies</li> </ul>
<b>SI Institutions</b>	<ul style="list-style-type: none"> <li>- Culture</li> <li>- Traditions</li> <li>- Conventions</li> <li>- Legitimacy</li> </ul>	<ul style="list-style-type: none"> <li>- Markets</li> <li>- Sector rules</li> <li>- Milieus</li> </ul>	<ul style="list-style-type: none"> <li>- Education system</li> <li>- Welfare system</li> <li>- Laws and political structures</li> <li>- Participation rights</li> </ul>
<b>Social Innovation Objectives</b>			
<b>SI Motives, objective (aimed impact)</b>	<ul style="list-style-type: none"> <li>- Empowerment</li> <li>- Participation</li> <li>- Social cohesion</li> <li>- Equity</li> </ul>	<ul style="list-style-type: none"> <li>- Profit maximisation</li> <li>- Pareto-optimum</li> </ul>	<ul style="list-style-type: none"> <li>- Welfare maximisation;</li> <li>- Inclusion</li> <li>- Discharge of public budget</li> <li>- Legitimation</li> </ul>
<b>Social Innovation Principles</b>			
<b>Social Innovation Efficiency (di-lemma’s)</b>	<ul style="list-style-type: none"> <li>- Unclear what efficiency means (in relation to economic and political)</li> <li>- Contextual embedded vs. de-contextualised diffusion</li> </ul>	<ul style="list-style-type: none"> <li>- Internal as well as external efficiency</li> <li>- Static vs dynamic efficiency</li> <li>- Competition vs collaboration</li> </ul>	<ul style="list-style-type: none"> <li>- Short term vs long term</li> <li>- Autonomy vs public funding dependency</li> </ul>
<b>Social Innovation Governance (modes)</b>	<ul style="list-style-type: none"> <li>- With or without government</li> </ul>	<ul style="list-style-type: none"> <li>- With or without government</li> </ul>	<ul style="list-style-type: none"> <li>- Public regulation</li> </ul>

Table 3. A categorisation of SI Components, Objectives & Principles

### 3.3 Towards an Economic Framework of SI

There is no denying that SI is the ‘new kid on the block’ as a societal driver of change, and consequently also in innovation research. It lags behind in showing its importance for economic development, and has to catch-up with other forms of innovation in raising awareness of its role in value creation and economic growth. We will therefore first discuss the economic underpinnings of other forms of intangibles and other forms of innovation, namely first in the private sector (firms) and subsequently the public sector. The discussion basically concerns the claim that some expenditures on intangibles should not be seen as costs, but as investments, because they increase the productive capacity in the future. However, these intangibles are very hard to measure, and the future (return on investment) may take quite a while to materialise. When expanding the framework by adding the public sector, and finally the civic sector (including citizens, households, communities and third sector organisations), it becomes even harder to do so. With these three sub-sectors, we will subsequently suggest a systemic economic framework of SI (one in which investment in SI will lead to economic benefits), and discuss it at micro-level and macro-level, referring to some SI case studies and literature.

#### SI as an input for economic growth

Our focus in this paragraph will be on SI as an input to economic growth. We would like to refrain from complicating the discussion at this stage by extending the analysis beyond GDP and welfare, and towards human wellbeing and quality of life, but do need to point to work done on this topic by Pouw & McGregor (2014). They broaden the narrow view of welfare to human wellbeing by defining the latter as “*a state of being with others and the natural environment that arises where human needs are met, where individuals and social groups can act meaningfully to pursue their goals, and where they are satisfied with their way of life*” (Armitage et al., 2012: 3). This conception of wellbeing takes into account the material, relational, and cognitive/subjective aspects of people’s needs and goals in life. This ability to pursue goals in life is also central in the approach taken by CRESSI (Houghton Budd et al., 2015; Nicholls and Edmiston, 2015). Although these non-material, intangible, goals are very important for those involved in SI, we would like to focus on the ‘hard’ material objective in terms of for instance GDP/capita. This is necessary to convince those who do not, at the first instance, care about the more ‘soft’ passions, purposes, and goals (for people and society as a whole), or even about how welfare is distributed, that investing in SI makes sense.

### 3.3.1 Investment by Firms in Intangibles & its Economic Impact

As Stiglitz et al. (2009: 144) point out, economists are increasingly confronted with the challenge of measuring 'intangibles' in the economic system, because an increasing share of investments and an increasing share of outputs are intangible, and it is difficult to estimate the market value by capitalising/monetising these intangibles. We first look at various research programmes, which have studied the impact of investment in intangibles by firms on economic growth.

The INNODRIVE research project for instance aimed to provide new data on intangible capital and to identify its impact on economic growth. In the past, economic growth could be explained by investment in manufacturing, improvements in educational attainment and investment in R&D. But, this is not enough to explain growth performance today. The results of the INNODRIVE project showed that economic competence related to organisational capital of management and marketing is one of the key drivers of growth. The study recognises the need to treat intangibles as investments, creating future value, rather than as intermediate costs. INNODRIVE produced new estimates to capitalise the intangibles following the (CHS) approach of Corrado et al. (2006), but they have also advanced this approach by developing new data on intangibles using both expenditure and performance based estimates of intangible capital. Besides innovative property (R&D and licence costs) and computerised information (software and databases), this new approach included economic and firm competences i.e. spending on reputation (advertising), firm specific training and organisational capital. They have added items, which were often excluded from both the bookkeeping systems of companies and the national system of accounts. After including all these additional intangible investments by firms, the GDP in the EU27 area is 5.5% higher (Piekkola, 2011). This indeed shows that, in the words of Corrado (2012): *"the traditional capital estimations are understated, because many costs of innovation are not counted as investment"*. This is an important implication of the macro-economic measurement, or capitalisation approach of Corrado et al. (2006) who have stated that: *"any use of resources today designed to increase the productive capacity of the firm in the future is investment"*

Research on  
Intangibles

Another research project COINVEST confirmed for a selection of European countries what had already been documented for the US, namely the rapid growth of investments by companies in R&D, sales and marketing, and organisational capital, and that these investments, which they collectively called intangibles, are an important driver of output growth and company value. They defined an intangible asset or intangible investment as:

*“identifiable non-monetary assets that cannot be seen, touched or physically measured, which are created through time and/or effort and produce an enduring knowledge asset [...]Some knowledge assets are protected by formal means e.g. trade secrets (e.g., customer lists), copyrights, patents, and trademarks. Others are not, such as know-how, knowledge, collaboration activities, leverage activities, and structural activities.” (Haskel & Edlin 2010)*

The focus in this definition is on knowledge, where especially the measuring of the value of the investments or assets regarding informal knowledge is hard to estimate. Although a large part of the intangibles are still lacking, the research showed for instance that in manufacturing, intangible investment exceeds tangibles in all the selected EU countries. In finance and business services, the reverse is the case (Haskel & Edlin, 2010).

Regarding innovations in firms Schumpeter distinguished between five different types of innovations:

1. Introduction of new products.
2. Introduction of new methods of production.
3. Exploitation of new markets.
4. Creation of new organisational structures in an industry,
5. Development of new sources of supply for raw materials or other inputs.

In economics, most of the focus over the years has been on the first and the second of these (the last one, on new inputs, is hardly referred to anymore). Data on R&D expenditure by firms (which is mostly spent on product innovation) is largely available, and not long ago the so called Barcelona objective of reaching 3% R&D expenditures as a share of GDP has been the key target in aiming for economic development in the EU. Together with organisational innovation and market innovation (also referred to as non-technological forms of innovation) these four types of innovation (see figure 2) are still distinguished in the Oslo Manual<sup>1</sup> (the international standard guideline on how to measure innovation) and in many innovation surveys, such as the Community Innovation Survey (CIS). However, the distinction between these four types of innovation does not capture very well the fact that (especially concerning service design and development of new business models) innovation involves new combinations of these four, which are often very hard to separate from each other (see Figure 2). This is especially the case concerning new services and new business models (as well as for SI).

---

<sup>1</sup> Although, what Schumpeter referred to as ‘market innovation’, has been changed in the Oslo Manual and CIS into new marketing methods or innovative marketing.

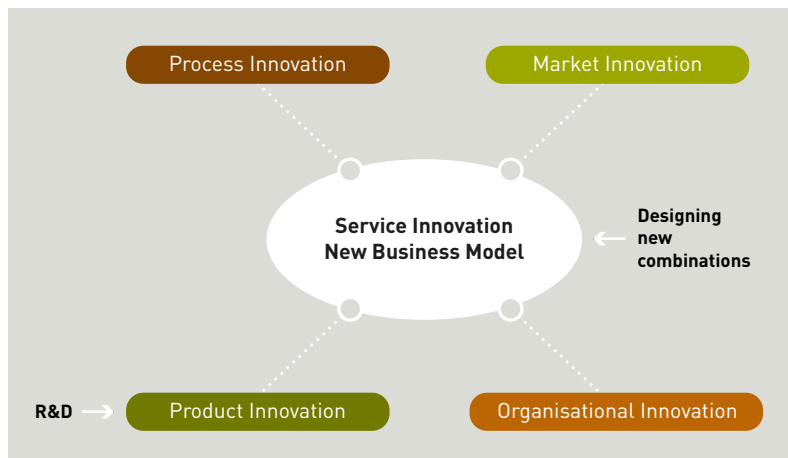


Figure 2. Schumpeter types of innovation

While an invention concerns the creation of the first idea of a new product or process, innovation refers to the use of this new and better idea or method, the attempt to try it out in practice and to bring it on the market, or deliver it as a public service (Fagerberg, 2013). So where inventions can be seen as technological ‘breakthroughs’ in science, innovations can be seen as ‘breakthroughs’ in markets and societies. Schumpeter described this with his concept of creative destruction. This concept is more dynamic than the neoclassical strand of economics that emerged by then, and that according to Schumpeter was a too passive view on economic life. He wanted to explain that: *“a source of energy within the economic system which would of itself disrupt any equilibrium that might be attained”*. (Schumpeter, 1937/1989: 166). Innovation is this dynamic source in capitalism.

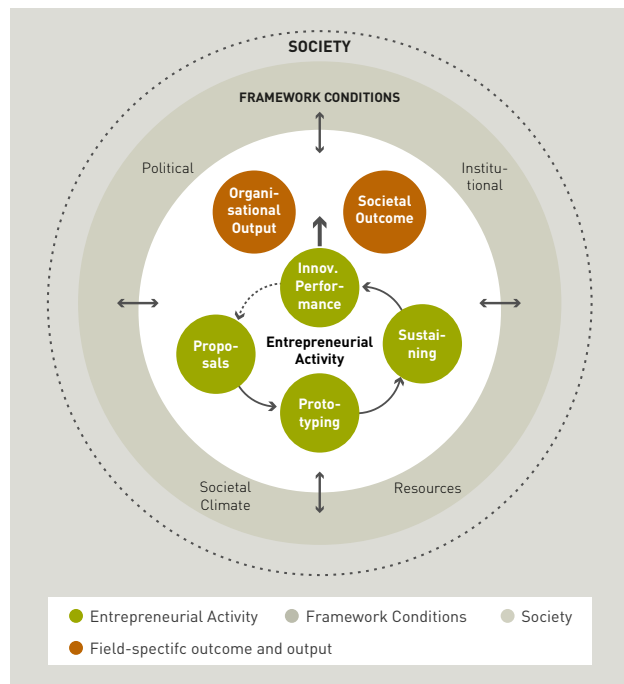
Innovations as breakthroughs

In order to turn an invention into an innovation, an innovative entrepreneur combines several different types of knowledge, capabilities, resources and skills. The person or organisational unit which combines all these factors in new ways was labelled ‘entrepreneur’.

Innovative entrepreneur

So, for Schumpeter the concept of innovation was indeed closely related to entrepreneurship. Although he often wrote about it as a person (and is sometimes criticised for that), he referred to the entrepreneurial function of coming to new combinations, which replace old ones (Fagerberg, 2014).

Figure 3. TEPSIE's Integrated model for measuring SI



Source: Adapted from Krlev et al. (2014)

Since he was of the opinion that scientists should leave questions that arise outside the boundaries of their own discipline to others, he stuck to economics. But, this does not imply that the entrepreneurial function of coming to new combinations cannot be performed by an 'Entrepreneurial State' (Mazzucato 2013a), or a social innovator. In this respect Krlev et al. (2014: 209) refer to the notion of sector neutrality, since 'social innovation can occur in any sector', and 'entrepreneurial activity' is therefore central in their macro-model for measuring SI which has been developed under the TEPSIE project (Figure 3)

### 3.3.2 Additional Intangibles & Innovations in the Public & Civic Sector

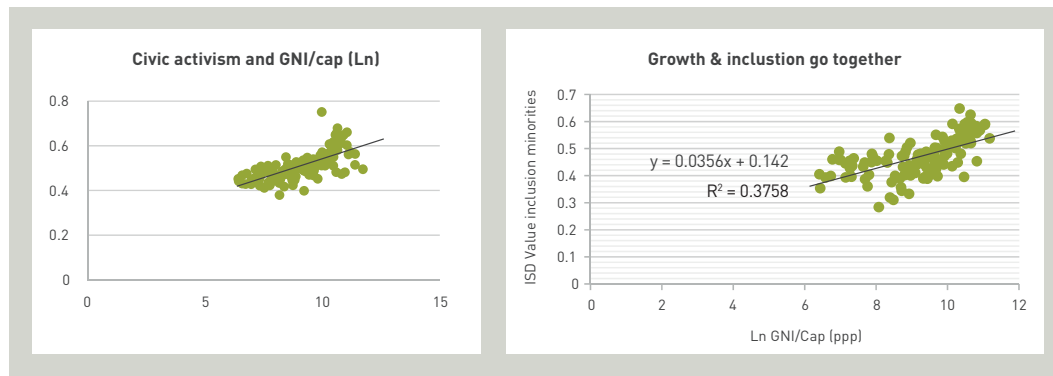
So what can we say about the role of intangibles and innovation in value creation in the public and civic or third sector? What kind of capital or intangibles are we actually talking about?

#### Intangible Assets

For the social or civic sector, we can think of social capital. The IAREG for instance has analysed the role of intangible assets on regional economic growth in Europe. The project identified four key intangible assets impacting on growth: knowledge capital, human capital, social capital and entrepreneurship capital. There are several theoretical explanations for the impact of social capital on economic growth,

e.g.: reducing transaction costs, or (as sunk transaction costs) reducing the cost of transformation (including institutional change), or its impact on ‘spatial sorting’ by firms or human capital (Storper, 2011). Therefore, IAREG also analysed the ensemble effects of these intangible assets on the location of firms.<sup>2</sup> Also Soete et al. (2009) report on a positive impact on regional economic growth from social capital, which is captured by various indicators on trust. De Haan (2015) shows how, at a more global level, aspects of social cohesion (e.g. civic activism and inclusion) relate to economic growth (Figure 4).

Figure 4. Civic activism and inclusion in relation to economic growth



Source: De Haan (2015)

According to Mazzucato (2013a) the role of the public sector in value creation via innovation and human capital formation is undervalued. She for instance points out that every technology that makes the iPhone so ‘smart’ was government funded: the Internet, GPS, its touch-screen display and the voice-activated Siri. Mazzucato showed that the private sector only had the courage to invest after an ‘Entrepreneurial State’ made the initial high-risk investments. Moreover, unlike the public sector, the private financial sector has rather extracted value and did not invest in the increase of innovation capacity or human capital. Mazzucato also calls for a renewed appreciation for the role of the state concerning value-creating investments in technological innovation and human capital formation. In *“a world in which private finance is pursuing short-term profits and focusing on value extraction activities, often it is only public finance that is able to provide the long-term patient capital that nurtures learning and innovation”* Mazzucato (2013b: 7). It is not only the bankers that make it possible to carry out the new combinations associated with innovation (Schumpeter 1912, p. 74) but also an entrepreneurial state can make new combinations possible. However, Mazzucato (2013a, 2013b) mainly refers to investments in R&D and education, and not in SI.

Role of public sector

Concerning the long- vs. short-term vision with respect to investment, Hall and Soskice (2001) have distinguished a number of varieties of capitalism. In some

Varieties of capitalism

<sup>2</sup> [http://cordis.europa.eu/result/rcn/46401\\_en.html](http://cordis.europa.eu/result/rcn/46401_en.html)

**Public  
intangibles**

countries with a more ‘stakeholder’-type of capitalism, such as Germany and Japan, banks have been more willing to be ‘patient’ financiers of innovation, more so than in countries with a ‘shareholder’ type of capitalism, such as in the US or UK, which are more driven by quick returns and speculation (Tylecote and Visintin, 2008).

Capitalising (estimating the market value of) intangibles in firms is difficult, but in the public sector it is even more difficult, and currently most public expenditures are not counted as investments, but as consumption because it is seen as satisfying current collective needs, and not as services intended to create future societal benefits. Corrado, et al. (2015) makes some suggestions on how to approach the problems in capitalising public intangibles. After distinguishing various government functions, they focus on the investments/assets concerning health, culture and education (Table 4). A complication when extending the economic framework by integrating functions of the government is that government serves more functions than ‘economic affairs’, and also more than ‘social protection’. This explains why almost each ministry in Europe has designed an innovation strategy or system of its’ own (silo) to serve the needs of society in the concerning policy domain. In this respect, many kinds of innovation (public innovation, business innovation, technical and non-technical, ICT-innovation, organisational innovation, SI, etc.) have become pervasive, serving multiple or general purposes, which opens possibilities for new complementary combinations.

Table 4. Classification of functions of government (COFOG)

FUNCTION			
①	General public service <sup>1</sup>	⑥	Housing & community amenities
②	Defense	⑦	Health
③	Public order and safety	⑧	Culture & recreation <sup>3</sup>
④	Economic affaires	⑨	Education
⑤	Environmental protection	⑩	Social protection <sup>4</sup>

<sup>1</sup> Includes interest payments

<sup>2</sup> Transportation affairs, general economic and labour affairs, agriculture, energy and natural resources

<sup>3</sup> Also includes religion

<sup>4</sup> Disability and retirement income, welfare and social services, unemployment and other transfers to persons

Source: Corrado et al. (2015: 4)

Based on the same CHS logic that was applied to for-profit business activities, Corrado et al. (2015) propose three new categories of public investment:

1. investments in information, scientific, and cultural assets
2. investments in organisational competencies



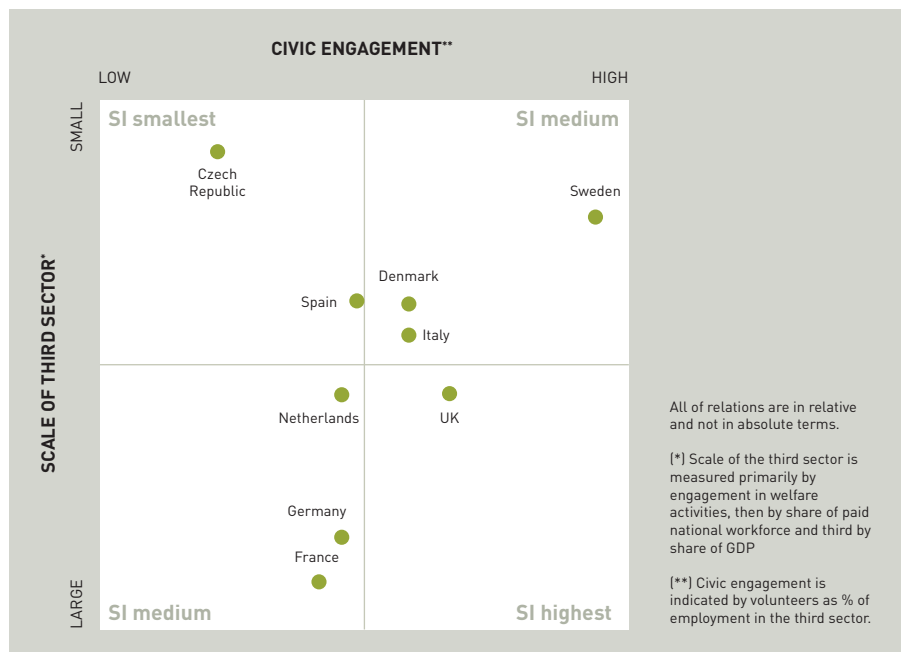
### 3. social infrastructure.

Justifying the need for this last category, which includes human knowledge capital and human health, they refer to long-lasting societal assets.

We intent to extend the economic framework beyond the private and public sector. In this respect an interesting project is ITSSOIN, which is a European research project that studies the 'Impact of the Third sector as Social Innovation'. In one of its deliverables Anheier et al. (2014) state that *“the ability to foster social innovation as a means of enhancing social productivity may not only result in the production of different sorts of capital (Bourdieu, 1986), but also depend on the organisations' capacity to tap into them. Third sector actors may not generally possess a high level of economic capital but they can draw on other sorts of capital, for instance, on social (which is vital to the mobilisation of stakeholders) or cultural capital (values and virtues that are crucial for the ability to gain legitimacy). We might add, 'public' or 'political capital'.*

Based on macro indicators capturing the size of the third sector and for civic engagement (volunteers in the third sector) they provide a framework to estimate the SI potential (see Figure 5). These two components can be regarded as key for indicating the supply side of SI.

Figure 5 Categorisation of aggregated social innovativeness\*



Source: Anheier et al. (2014)

## Welfare regimes

In SIMPACT we have taken the various welfare regimes in Europe as broader social-institutional contexts for SI (Rehfeld et al. 2015). Anheier et al. (2014) from the ITSSOIN project have also studied how the (afore mentioned) varieties of capitalism serve as an economic-institutional context for SI. They show how welfare regimes (as social contexts) and varieties of capitalism (as economic contexts) relate to SI and illustrate where contradictions occur across these classifications and their implications for SI. They conclude with the tentative hypotheses that the SI potential of the third sector increases:

- *“With the number of multi-stakeholder contacts (including the contacts to the commercial and public sphere, civic engagement);*
- *With the diversity of the resource base (including diversity in financial sources, volunteering, expertise, and knowledge);*
- *With the formulation of value sets that can ‘connect’ to others in terms of social mobilisations and dissemination.” (Anheier et al. 2014).*

## Economy as institutional process of scarce resource allocation

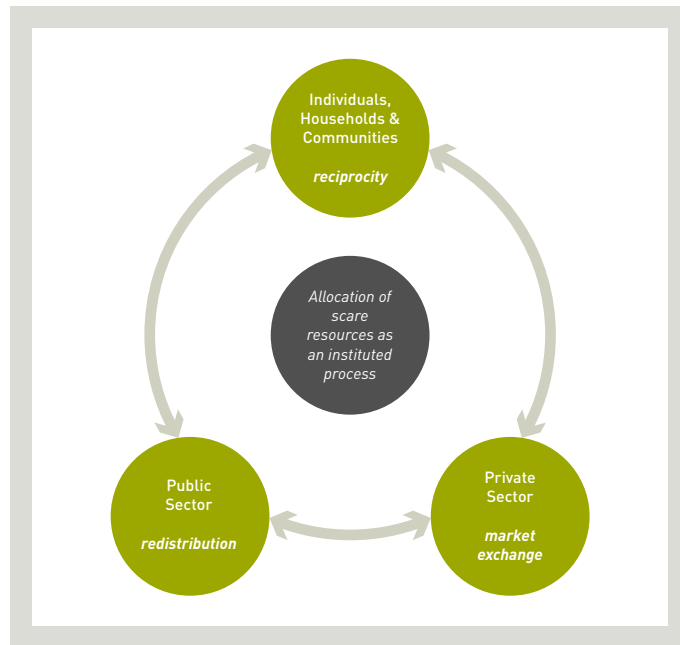
Pouw & McGregor (2014) take an even more pluralist economic perspective. Building on Polanyi (1944), they see economic relationships as being embedded in a broader context consisting of a political realm, a society and culture and a natural and built environment<sup>3</sup>. From this perspective, they define the economy as the instituted process of scarce resource allocation, by and to economic agents. Besides the private and public sector, they distinguish a third economic sector consisting of individuals, households and communities, and each of these three sectors or domains has its archetype allocation mechanism: market exchange in the private sector, redistribution in the public sector, and reciprocity in the civic sector (Figure 6). This framework allows the authors to study the roles that markets, politics and society play. In addition, it enables them to study how they interact to shape the economic processes and outcomes fulfilling people’s needs and goals (Pouw & McGregor 2014).

In mainstream economics, expenses by citizens are counted as consumption, and not as investments. But, even when some expenses by individuals and households would be counted as investments (e.g. in human or social capital) the identification of reciprocity as an important allocation mechanism in the civic sector, explains why capitalisation or monetisation of intangibles in this sector is very complicated. Compared to the private sector it is far more difficult to measure or estimate the inputs and outputs in terms of market value or exchange value.

---

<sup>3</sup> Also the CRESSI project takes such a multidimensional perspective, which is also applied to a multidimensional perspective on marginalised people, innovation and capabilities, see figure a in Appendix

Figure 6. Key allocation mechanisms in the three economic domains



Source: Pouw, N. & A. McGregor (2014)

The challenge is to construct a citizen’s version concerning their ‘productive capacity’ of the earlier mentioned statement of Corrado et al. (2006) that: *“any use of resources today designed to increase the productive capacity of the firm in the future is investment”*. In a citizen’s version, SI inputs which empower marginalised groups in society, and increase capabilities to pursue their ‘productive goals’ should indeed be seen as investments, not as costs or consumption. The four case study examples described in the appendix (textbox I) all involve a mix of resource inputs designed to increase certain capacities of the vulnerable people involved.

In the case of VoorleesExpress the key resources are volunteers, the targeted capabilities comprise reading skills of children of 2-8 years old; skills that are appreciated by labour markets, and can be turned into exchange value 10 to 15 years after VoorleesExpress when the kids have grown up and get their first job. Funding mostly comes from local public governments, which enables the social innovator in its entrepreneurial function of coming to improved combinations of resources from the public sector, private sector and civic/ third sector.

**Example**  
VoorleesExpress

A major complication in the case of investments in SI is that they are often designed to increase the productive capacity of the sectors combined, they serve the goals of various stakeholders from the three sectors. Another way to put it: the value added of SI is in the synergies between the public, private and civil sector. This also implies that economic impact not only comes from the enhanced capabilities of the people in the target groups, and the enhanced growth of the social innovator, but there are

often also contributions to the economic impact to be found in the public sector and the private sector.

**Example  
WORK4ALL**

In the case of WORK4ALL, a project tackling youth unemployment induced by local public procurement with social return objective (see textbox I in Appendix) all of the involved stakeholders in the SI invest and each of these stakeholders get a different kind of economic return on their investment. The unemployed youth works at low cost but get free training. The education institute and the construction company invested in new training methods and guidance and this experience can be used for acquiring new assignments from public procurement. The local government invests in the procurement and its procedure, but for instance hopes to save money on a reduction in unemployment benefits. The joint development of this SI only works when the investment is a combined effort.

As a working hypothesis, we come to the following economic framework of SI (Figure 7). The inputs to SI come from a variety of resources and capabilities, from the civic, the private as well as the public sector. As an additional source of variety, SI brings new combinations of social, economic and public/political resources and capabilities, which in interaction may create more economic growth than previous combinations (Figure 7).

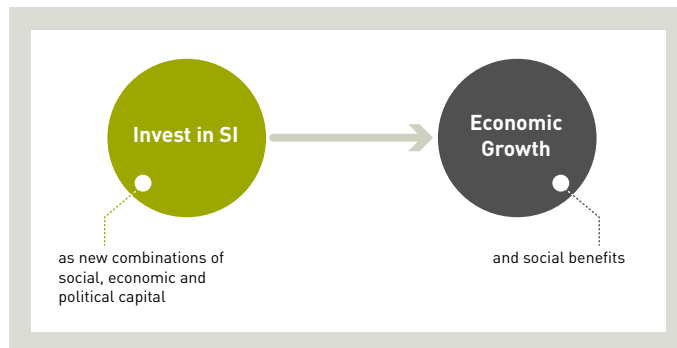


Figure 7. The Economic framework of SI

The investments in SI initiatives or projects combine the social, economic and political resources and capabilities of the involved (civil-social/economic/public) stakeholders. The contribution to economic growth not only comes directly from the growth or increased capabilities of the social innovator or Social Entrepreneur. It also comes from the impact these innovators and entrepreneurs have on others in society, e.g. most notably from the increased capabilities of the targeted beneficiaries in the social/civil sector, but also from the impact on the users of the innovation in the public/political sector, and the impact on the donors in the private sector, etc.

At the micro-level we refer to the Resource Based View on this. The Resource-Based View (RBV) of the firm (Penrose, 1959), built on Schumpeter's perspective on value creation (Fagerberg, 2014), views the firm as a bundle of resources and capabilities. Applied to social innovators we could say that from a set of scarce resources we should not expect a strong business structure. Structural resource gaps are bridged by volunteers, through use of personal private assets, with strong personal commitment of people working in the organisation, and with a strong orientation on achieving impact for their target group. With their focus to invest in others, they do often forget to invest in themselves. However, the Resource-Based View also states that by uniquely combining a set of complementary and specialised resources and capabilities (which are heterogeneous within an industry, scarce, durable, not easily traded, and difficult to imitate), this is what leads to value creation (Penrose, 1959). Therefore, the scarcity of a certain resource could be compensated by another specific resource or capability, and the RBV is about this unique combination. The Resource-Based View fits the situation of SI quite well as stated by Rehfeld et al. (2015), but the kind of resources which are key in SI are often different from those for other types of innovation, e.g. volunteers are a key resource.

For instance, in the SI case of VoorleesExpress (see Appendix Textbox I) volunteers invest time in reading with young children which lack language skills. For the social innovator who has developed and implemented the method these volunteers are a key resource. Since half of the local organisations have difficulties in acquiring volunteers the social innovator invested in a marketing study to find out which kind of people are most interested to read as volunteers with the children (for whom it is most rewarding). One of the main types of the resulting matrix concerns woman whose own children left their home to live on their own. Another type consists of first year students who come to live in an unfamiliar city. For them it is a nice way to get to know the city and integrate in their new environment. This example shows what kind of value creating investments are made by social innovators, what kind of resources are to be secured, and how difficult it is to estimate the related exchange values.

In all the four examples of SI provided in the Appendix, students and education institutes play a role as a resource. However, not the technological disciplines, but social sciences and humanities. E.g., social innovators seldom conduct impact assessments, but in their annual reports and their value propositions social innovators refer to relevant studies from social scientists as circumstantial evidence to back up their vision and proposals.

The examples of SIs provided in the Appendix (Textbox I) show that indeed they can be seen as 'bundles of resources and capabilities', as new combinations which have been developed by social innovators. These new niches integrate resources of the civic, public and private sector and have been made possible with funding from

all these three sectors. Besides economic resources, the social resources (e.g. working with volunteers) or capabilities and political resources and capabilities are often more prominent assets, e.g. in relation to serve the needs of beneficiaries or in lobbying for public grants. A core objective for about two third (72%) of the SIMPACT cases is to empower and develop capabilities of the marginalised and vulnerable beneficiaries (Terstriep et al., 2015). According to (Santos, 2012) this empowerment of others, outside the boundaries of the organisation, is a key characteristic of social entrepreneurs.

### Dynamic capabilities

Teece and Pisano (1994) applied this RBV view of the firm to innovation and extended it into the concept of “dynamic capabilities”, defined as “the skills, procedures, organisational structures and decision rules that firms utilise to create and capture value” (Teece 2010: 680). These two views are quite similar, but the main difference is that the RBV is a static approach (to the allocation of resources, and to efficiency), while the latter dynamic concept refers also to the ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments. In this respect the concept is similar to that of resilience, which is often used at a systems level. So, the RBV only addresses efficiency in relation to current value creation, while dynamic capabilities refer to dynamic efficiency and the capabilities to create value in the future. This “dynamic capabilities’ concept is less well applicable to SI as a characterisation, but it seems applicable in explaining some of the barriers of SI. social innovators do not invest enough in developing dynamic capabilities, routines which empower them to address the uncertainties of the future; relational routines, broadened perceptions and changed awareness which makes themselves more resilient and capable. The lack of investments in building up dynamic capabilities is evidenced in Terstriep et al. (2015), e.g.: in the form of a lack of managerial knowledge (p.51), and skills (p.48). Social innovators should empower themselves in cooperation with their surrounding eco-system of innovation in which their main beneficiaries, as well as their partners are embedded. In assessing the impact of SI an assessment of the increased capabilities of the social innovator should be included. Most attention in evaluations and impact assessments of SI are devoted to the economic impact on others, e.g. on those who fund and use the SI, such as local public governments, and to the economic results for the beneficiaries (in our case the marginalised target groups) and the wider indirect societal economic impact that generates from that.

### 3.3.3 Use Value & Value Co-Creation in a Systemic Service-logic of SI

The value creation concept of most economic theories is based on goods and exchange value, while for SI a logic of value creation based on service and use value would be more relevant. The concept of resources in service-dominant logic (Vargo et al. 2008) has been shaped by the resource-based view. The concept of service-dominant logic makes a distinction between use-value and exchange value. Vargo et al. (2008) describe how the concepts of use-value and exchange value have been addressed in the economic literature; and before, since the Greek philosopher Aristotle (384–322 BC) was first to distinguish between use-value and exchange-value (Fleetwood, 1997). Adam Smith (1776/2000: 31) referred to “*value-in-use*” and “*value-in-exchange*”, but emphasised the latter, and economic theories have since focused on exchange value. Including those of Marx: although he had also distinguished use-value from exchange value, his main point was about the unfair exchange between capital and labour. As opposed to a ‘goods-dominant logic’ Vargo et al. (2008) propose a ‘service-dominant logic’, based on ‘value-in-use’, or ‘value-in-context’ (see Table 5).

Good-dominant logic vs service-dominant logic

Service is defined as the “*application of specialised competences (knowledge and skills) through deeds, processes, and performance for the benefit of another entity or the entity itself*” (Vargo and Lusch 2004: 2). Service can be seen as the fundamental basis of exchange, and goods can be seen as a distribution mechanism for service provision. An advantage of this framework is that it unifies the exchange mechanisms of the civic, public and private sector domain as presented before in Figure 6.

Table 5. Exchange value in Good-Dominant logic vs. Use-value in Service-Dominant logic on value creation.

	Good-Dominant logic	Service-Dominant logic
<b>Value driver</b>	Value-in-exchange	Value-in-use or value-in-context
<b>Creator of value</b>	Firm, often with input from firms in a supply chain	Firm, network partners, and customers
<b>Process of value creation</b>	Firms embed value in “goods” or “services”, value is ‘added’ by enhancing or increasing attributes	Firms propose value through market offerings, customers continue value-creation process through use
<b>Purpose of value</b>	Increase wealth for the firm	Increase adaptability, survivability, and system wellbeing through service (applied knowledge and skills) of others
<b>Measurement of value</b>	The amount of nominal value, price received in exchange	The adaptability and survivability of the beneficiary system
<b>Resources used</b>	Primarily operand resources	Primarily operant resources, sometimes transferred by embedding them in operand resources-goods

	Good-Dominant logic	Service-Dominant logic
<b>Role of firm</b>	Produce and distribute value	Propose and co-create value, provide service
<b>Role of goods</b>	Units of output, operand resources that are embedded with value	Vehicle for operand resources, enables access to benefits of firm competences
<b>Role of customers</b>	To 'use up' or 'destroy' value created by the firm	Co-create value through the integration of firm-provided resources with other private and public resources

Source: Vargo et al. (2008)

### Value-in-use

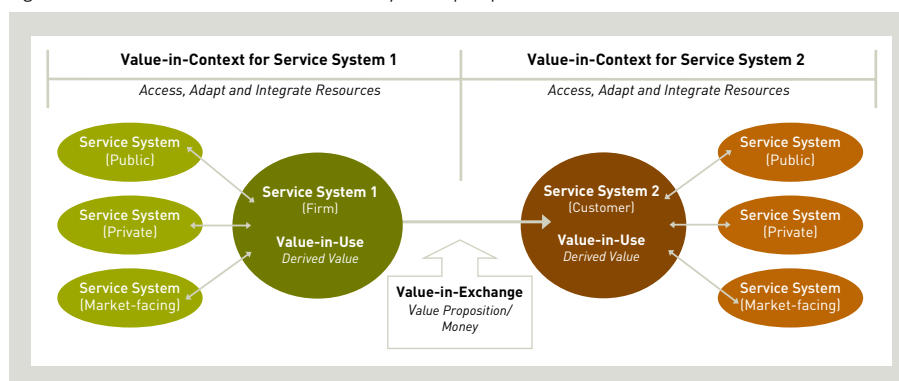
Value realisation takes place in use of services (or indeed goods) referred to as 'value-in-use' or 'value-in-context', in other words users continue the value creation process through use. When we apply this to a SI, which empowers vulnerable people, the impact indeed, keeps increasing each time these beneficiaries use the capabilities they have developed because of the SI. In the examples of the case of VoorleesExpress and Mothers of Rotterdam (see Appendix Textbox I) this is actually why these SIs address certain problems at a very early phase in life. The early in life investments in personal development and skills are the most efficient, as they give the highest return on investment.

### Value co-creation

In relation to service (or resource, or intangibles, or knowledge) there is a different meaning of the word 'use' from the traditional meaning in relation to goods where 'use' and 'consume' refer to 'use up' and 'destroy'. In a Service-Dominant logic users co-create value. The influence of the RBV is evident in the following statement:

*“Moving the locus of value creation from exchange to use, or context, means transforming our understanding of value from one based on units of firm output to one based on processes that integrate resources”.* (Vargo et al. 2008)

Figure 8. Value co-creation in a service-systems perspective



Source: Vargo et al. (2008: 149)



Although Vargo et al. (2008) often refer to a service firm and a service customer (see Figure 8), they mention that we can also consider individuals, groups, organisations, firms, and governments to be service systems, or any other social or economic actor that can take action, apply resources, and work with others in mutually beneficial ways. This characterisation very much applies to the wide range of stakeholders in SI.

In the service dominant logic, the firm cannot deliver value, but only offer value propositions (Table 6). “[T]here is no value until an offering is used – experience and perception are essential to value determination”. This implies that offerings must be integrated with the resources of other market-facing (i.e., from other firms) and non-market-facing (e.g., personal/private and public) resources for value to be created. Vargo et al. (2008) provide the example of a car gaining its value only through the combination of the manufacturer’s production processes (including its supply chain and other market-facing elements) and the customer’s private (e.g., driving skills) and public (e.g., roadways) resources.

Value vs  
value propositions

Table 6. Foundational premises of service-dominant logic

Service is the fundamental basis of exchange
Indirect exchange masks the fundamental basis of exchange
Goods are a distribution mechanism for service provision.
Operant resources are the fundamental source of competitive advantage
All economies are service economies
The customer is always a co-creator of value
The enterprise cannot deliver value, but only offer value propositions.
A service-centered view is inherently customer oriented and relational.
All social and economic actors are resource integrators.
Value is always uniquely and phenomenologically determined by the beneficiary.

Source: Vargo et al. (2008)

In the case of SI, when applying the ‘Service-Dominant Logic’ the social innovator cannot deliver value, but offer multiple value propositions (compared to the single value proposition as presented in Figure 8) to the various stakeholders who provide inputs or funding. The social innovators are resource integrators, who create value by combining the inputs (Figure 9).

Social innovators as  
resource integrators

Applying the concept of use value (or value-in-use, or value-in-context) and the service dominant logic implies that it is difficult to measure and monetise social value, that is, the value that nongovernmental organisations (NGOs), social enterprises,

Social value in ser-  
vice dominant logic

social ventures, and social programs create. In the words of Mulgan (2010: 41) “*Social value is not an objective fact. Instead, it emerges from the interaction of supply and demand, and therefore may change across time, people, places, and situations*”.

**Interaction between demand & supply**

The interaction between the demand for SI and the supply of SI is not mediated by price (exchange value). In this respect we can refer to Lundvall’s (1992) theory on interactive learning between producers and users of knowledge and innovations. With old traditional solutions both the producers and users of the solutions have a reasonable idea about the results and the value the solution will bring, but with new, innovative solutions the demand-side and the supply-side will have to interact and learn from each other in order to transform the innovation and reach to an improved result/value. This is how original prototypes of SI get changed into more mature SIs, and how SIs are diffused (or scaled-out) to other users and situations. In the case of VoorleesExpress and Granny’s Finest (see Appendix Textbox I) the proto-type SI has been diffused to other locations where it has been applied in a different context, with different partners, with different needs and potential. Therefore, the application of the SI and the results and value generated differs from place to place.

Since there is more to be communicated beyond price, auctions are for instance not a good tool to promote interaction between demand and supply for SI. One can think of other tools to promote interaction, such as organising events where social innovators can present new ideas for which juries and audience award the new idea’s with prizes. In the case of Granny’s Finest (see textbox in Appendix) winning such a social enterprise award was the moment they decided to start-up and they used the prize money to pay the rent of the first location.

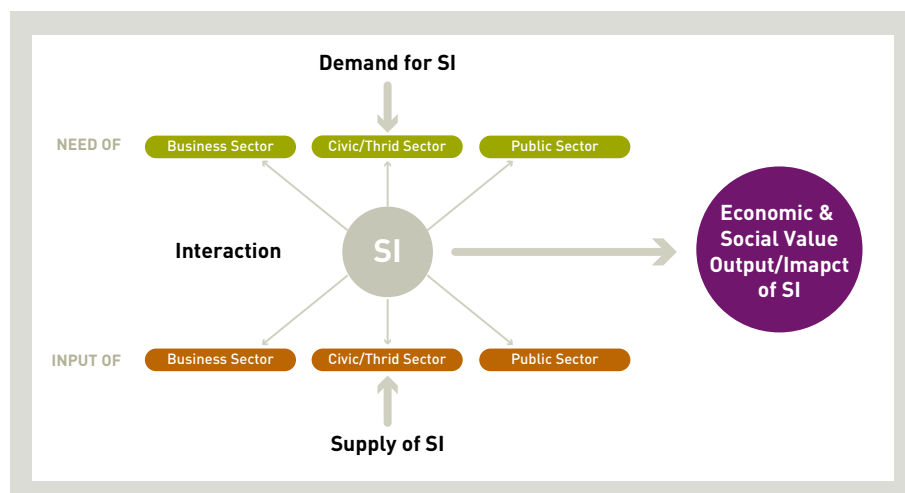


Figure 9. Conceptual framework of SI as value creation

As examples of how demand and supply for SI can explain the emergence of SI and the value it generates, we refer to local innovation strategies of metropolitan areas such as Stockholm, Hamburg, or Amsterdam, which have relatively high shares of immigrants and their economic growth oriented innovation strategies emphasise that when they want to maintain their innovative competitiveness that SI is needed to for instance promote the integration of immigrants and the development of their capabilities.

Also after the start-up of VoorleesExpress and Granny's Finest (see Appendix Textbox I) the demand and supply conditions explain the diffusion of the concerning SIs. For VoorleesExpress an important supply-factor is the availability of volunteers; e.g. in the southern province of Limburg it has proven more difficult to set up such local organisation of volunteers. For Granny's Finest it is important to be located at an urban care centre (as co-funder) where many elderly (effected by loneliness) are concentrated, who can easily reach the centre.

On the demand-side the market for the SI offered by Granny's Finest also consists of the civic (consumer) demand for the social fashion products which are knitted by and reduces the loneliness of the Granny's. The demand also consists of the demand from the local care companies for innovative solutions to identify and engage future clients in loneliness reducing activities. The interest or objective of the local governments is in the positive externalities from the social activities on the health and independency of the involved elderly, which could save public expenditure budgets.

### 3.4 What to Measure or Indicate?

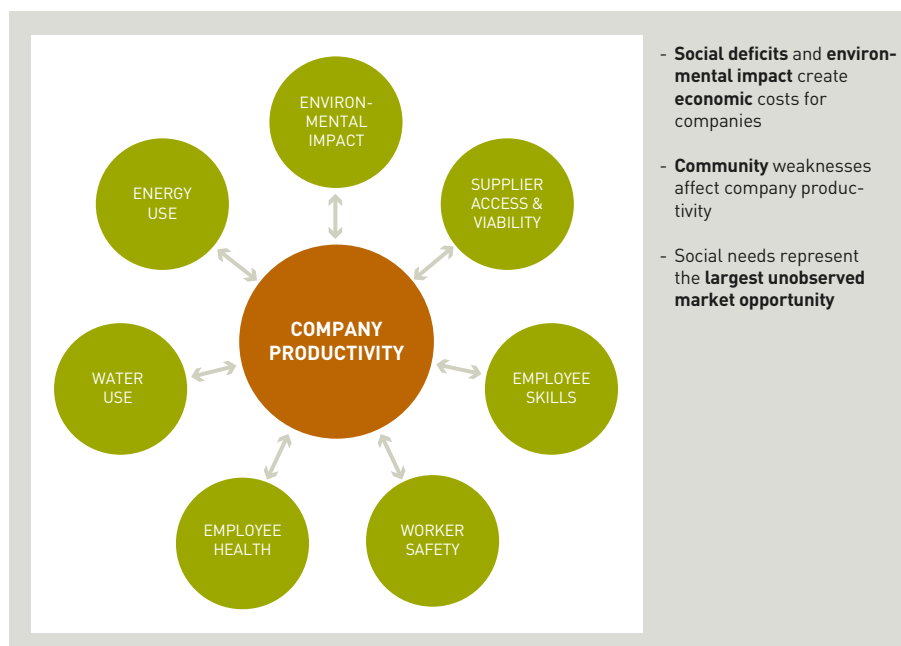
Since the relation between social innovators and their targeted beneficiaries is seldom a market relation in which the beneficiaries pay for the services as customers or consumers, it is difficult to monetise the exchange. Following the two possible options used by macro-economics to estimate the involved increase in intangible capital we could either follow the expenditure-based estimates of intangible capital, or the performance-based estimate. After discussing the problems with the '10 best ways to measure Social value' Mulgan (2010) suggest to take the expenditure option (which he defines as 'effective demand') more serious. One of the advantages is that funding and budget data for SI is often more easily available, at least as the meso-level of organisations and programmes. At least this expenditure data tell that someone, such as public agency, individual citizens, or foundation, is willing to pay for the outcomes.

As seen in the previous section 3.3.3, the creation of use value is an integral part of SI. This interpretation of the value of SI differs from the one used in the TEPSIE

report on measurement of social economies in Europe, where the authors depart from the notion that SIs are in principle “value neutral” (Hubrich et al., 2012). As explained, we follow the idea that SIs have a “value-in-use”, which is also apparent in the concept of shared value (Kramer and Porter, 2011).

Porter and Kramer’s concept of shared, social value creation (Creating Social Value) is inspiring, and even though it is clearly an extension of CSR (Corporate Social Responsibility) principles there are a number of elements which can be transferred to SI by simply replacing “corporate” by “society” (Figure 10).

Figure 10. The Creating Social Value Space



Source: Porter and Kramer (2011)

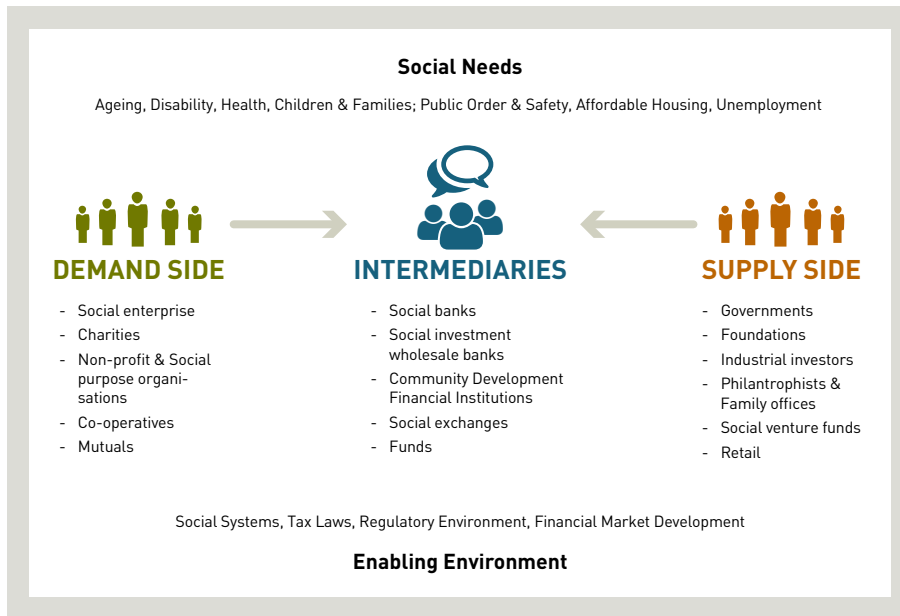
In the context of measurement, the realisation that social needs represent the largest un-served market opportunity combined with the realisation that (social) entrepreneurs, and perhaps society at large, need to combine the economic value with the social value of SI in order to achieve sustainability are at the basis of this concept.

Although we agree with the importance of socially/mission driven organisations as a key actor in SI, as indicated in the TEPsIE report, we do see these organisations as one of many (Third Sector) actors in the civic, public and private sector domain system of SI.

In a recent paper by the OECD (2015), on financial investment for social needs and impact measurement, an overview of players including those from the Third Sector,

and their demand and supply regarding funding, have been described and visualised (Figure 11).

Figure 11. Social impact investment market framework.



Source: Adapted from OECD, 2015

## 4 INDICATORS ON SOCIAL INNOVATION

### 4.1 Social Innovation Measurement

#### SI Measurement's vagueness

Much like the complaint on “vagueness” that was mentioned by some of the reviewed authors, in section 3, on the definition of SI we can echo the same for the measurement of SI. Although the environment in which SI finds its place might not wholly conform to the positivist view of rational and objective accounting there can be no denying that in an open society there is the need for accountability of organisations towards their stakeholders. Acknowledging this requirement for transparency there has been a push to create measurement frameworks for use in an admittedly difficult accounting environment, which does not adhere to the normal economic, and statistic principles.

Although there are several sources citing theoretical frameworks for a measurement effort at macro level, in practice there are few attempts made empirically. Among the most noteworthy academic efforts, are project related activities to which we have already referred, such as TEPsIE: Theoretical, Empirical and Policy Foundations for SI in Europe, CRESSI: Creating Economic Space for SI, and ITSSOIN: ‘Impact of the Third sector as SI’. However, most empirical work is done ad-hoc at the meso-level of projects, and it is mostly done by consultants. Statistics on SI as such do not exist yet. In this chapter we address indicators of SI, but first, we go back in the past by giving an overview on measurement of more traditional forms of innovation.

#### Measurement of economic innovation

The measurement of (economic/industrial) innovation has been researched for some decades now and we should first take a look at the literature which resulted from this research. After instigation of Schumpeter several steps were taken which led to Nelson et al.’s (1962) “Rate and Direction of Inventive Activity” in which foremost Kuznets’s article “Inventive Activity: Problems of Definition and Measurement” is quite applicable to our current problem. In consecutive waves more work was done which ultimately led to the publishing of the OECD Frascati and Oslo Manuals (resp. 1994 and 1997). Both manuals now count as definite sources for the collection and interpretation of innovation and R&D related data. It would therefore be opportune to have an idea of the approach taken by these manuals, in particular by the Oslo Manual which focuses directly on the measurement of innovation (and its different facets).

The Oslo Manual details five types of innovations as proposed by Schumpeter (1912):

Types of  
innovation

1. *Introduction of new products.*
2. *Introduction of new methods of production.*
3. *Exploitation of new markets.*
4. *Creation of new organizational structures in an industry,*
5. *Development of new sources of supply for raw materials or other inputs.*

Obviously, this typology is almost exclusively focused on industrial/ economic innovations. However, this does not exclude the informative value and in some case direct translatable nature of this typology. As we already have seen SIs unlock services and markets for marginalised communities. SIs also aim at building capacities (and capabilities) which are directed at solving societal problems. Lastly, SIs focus on processes involved in organising and facilitating novel ways of (social) work, social action, and adjustments to social structure. Hence we could rewrite the typology as follows:

Types of  
social innovation

1. *Introduction of new social products (Bonchek and Choudary, 2013)*
2. *Development/building of capacities and capabilities directed at solving societal problems*
3. *Creation of new, and adjustments to existing, market/social structures (Swedberg, 1994) directed at improving access to such market/social structures for marginalised communities.*
4. *Introduction of new organisational processes aimed at (social) work and social action*
5. *Drafting in new societal players in the SI economic framework.*

Although indirectly related to our goals, and focused on the investment framework for addressing social needs, the above Figure 11 does give us a clear idea which indicators and data-points can be envisaged to play an important role in our measurement framework. We can see supply and demand side actors as well as the services/products for which investment is necessary in terms of social needs e.g. societal problems. This framework can be merged with our SIs typology by looking at the characteristics of each of the market frameworks' main influencing actor groups and environments.

## 4.2 Information & Data for SI Metrics

### Existing data sources as point of origin

As seen in the previous chapter we find that the measurement of SI is all but a straightforward exercise. In constructing a framework for measurement we should take care to include all the earlier mentioned aspects. However, it is practical to depart from the existing data sources where we could first take in the possible traditional economic activity metrics such as turnover, expenditure and employment in the sector. A third and for this sector unique metric would be the measurement of volunteer input in terms of manpower and time expended on volunteering. Next to these the Third Sector has another quantifiable activity, which is a tad more difficult as it is made of different components and even differs per NPO: income (Anheier, 2004). Income in this sector is of course quantifiable through measuring donated funds, however there are two more possible income flows; subsidies and sales which are potentially measurable (Salomon & Anheier, 1996).

### Measuring use value

The “use value” from these activities, however, is less easily measurable, at least not in the traditional way. Ethical, environmental, human rights, community and societal benefits are all less easily visible and measurable as they concern non-financial and non-physical resources but they are the main contributors to human welfare or better said well-being. But even if this use value is not directly visible there are still data and information that could be gathered on important “Use value” components such as:

- trust in government, institutions, policies, third sector initiatives and community actions (Nicholls, 2009);
- interest in, and recognition of, the needs of marginalised communities;
- capacities to, resolve problems, address needs and conflicting interests, and act on emerging conflicts;
- participation in common causes, working for the common good.

These data can be translated into metrics, but, it must be remembered that these metrics and their derived indicators are context sensitive and often address specific societal concerns and stakeholder needs.

Societal concerns/ stakeholders needs	Sources of Information	Metrics
Well-being	Poverty, health, education, empowerment, discrimination	Poverty reduction Improvement in access to health care Increasing educational attainment (formal and informal) Gender bias reduction through the empowerment of women Elimination of gender/education/income-based discrimination and marginalisation of disadvantaged communities



Societal concerns/ stakeholders needs	Sources of Information	Metrics
Participation	Social programs and actions	Number of people consulted, number of participants, duration of participation
Inclusiveness	Inclusion/exclusion of beneficiaries; Geographical, gender, educational, and social representativeness	Number of beneficiaries per territory, gender group, educational attainment group, and or other social grouping specific to the context.
Transparency	Access to information, freedom of speech and press, but possibly also corruption	Number of news outlets etc., freedom of speech metrics, corruption metrics
Accountability	Social responsibility, visible through internal and external reviews and audits	Number of audits done per project, feedback and response rates.
Efficiency	Procedures implemented to improve efficiency; reduce cost, increase accessibility and encourage stakeholder involvement	Number of beneficiaries involved, moneys expended and accessibility before and after implementation of the procedure or improvement.
Effectiveness	Input, through-puts and outputs used for meeting the intended targets (such as increased well-being)	Number of interventions and programs started under a project, Nr. of beneficiaries reached (with a positive outcome), etc.
Quality	Quality assurance in SI services and products, expectations and satisfaction levels of staff, stakeholders and beneficiaries	Existence of protocols, feedback from staff, stakeholders and beneficiaries

Table 7. A needs-solutions measurement framework

Based on work done by the CGG (2005), the above table summarises these outlined concerns and needs while relating them to the possible sources of information and the metric that could result in a meaningful indicator.

### 4.3 Micro-level of SI, Innovators, Beneficiaries & Initiatives

The information and relationships between SI Components, Objectives, and Principles as shown in Table 3, and the arguments further laid out in chapter 3 both underline that SI has to be analysed in a holistic way which does not only focus on the organisation performing the SI but also consider its embeddedness in a socio-economic, political and cultural context. For instance, the condition of the welfare state in which an SI emerges and operates determines to a large degree the problems (market failures, welfare state imperfections) and the target groups that SI may tackle, and the ways in which these can be tackled. To this end, SIMPACT distinguishes three dimensions of SIs, objectives, principles and components (see above).

### Problems in securing sustainability

Nevertheless, the case studies examined in WP3 of the SIMPACT project illustrate that there are a number of problems that emerge at the level of the SI organisation itself, namely problems in securing the sustainability of the organisation that performs the SI. This observation calls for a number of indicators that measure performance and impact of SI at the micro-level. To this end we refer to the business model canvas of Osterwalder & Pigneur (2010) which has also been underlying the analysis of case studies in WP4.

### Definition of target groups by social needs

The current results of SIMPACT (WP3 & 4) illustrate that many SIs tend to identify target groups solely by the social need that they aim to address but do not care (much) about the size of these groups, how they can be reached best (at affordable costs), and to what extent these groups may allow for scaling, which includes an assessment of the market size and type (e.g. its geographical scope). Finally, given the focus on the social need, questions like the purchasing power of the target groups or the identification of additional target groups to which SI services or goods can be sold are often neglected.

Most SIs have particular strengths in the identification of social problems that are not solvable by means of the market or the welfare state. However, the results of SIMPACT suggest that many SIs tend towards considering their solution as a unique and isolated service and do not consider what alternative or complementary services are or can be provided by other actors.

### SIs emphasise social mission

The narrow perspective on the social mission that characterises many SIs also affects the value proposition. As explained in section 3, for SIs, use value is typically more important than exchange value. However, every organisation that creates goods or services has to achieve revenues at least to cover the costs that are inevitably aligned with such an endeavour. As explained in section 3, co-creation plays an important role for SIs to realise value. Therefore, it appears necessary for SIs to identify co-creation partners that help to transform the social value or use value proposed by the SI into exchange value that helps the SI to generate long-term revenues. These co-creation actors are not necessarily limited to the target groups of the SI's social mission. Exchange value can also be co-created by the welfare state, by commercial companies or by other social actors, such as foundations. Many hybrid SIs provide examples for this co-creative transformation of use value into (monetarisable) social value.

As the case studies of SIMPACT have revealed, many SIs are not aware of their dependence on certain partners and of the risks the initiative is aligned with. This unawareness often results in problems to optimise processes, decision-making, resource allocation, quality assurance and to find an adequate legal form for the SI.

Finally, the regulatory context in which the SI evolves is a decisive factor for the SI's success and sustainability. However, in many cases this context is only considered with regard to failures within this context (defining the social problem targeted by the SI) but hardly with regard to resources provided by this context.

Regulatory framework as decisive factor

Regarding objectives, micro-level indicators of SI should primarily ease the assessment of the sustainability and impact of the SI with regard to the target groups, the social problem that characterises them, and the value proposition/ novelty introduced and offered by the SI.

Micro-level indicators of the economic impact and sustainability of SIs at the objectives level should cover the following aspects and questions:

Objective-related SI indicators

- **Goal definition:** What is the social problem addressed and how persistent is it? To what degree helps the SI to solve the problem? What are the short-term, mid-term and long-term goals?
- **Costs:** Is there a clear cost calculation of all activities and plans of the SI?
- **Exclusiveness/complementarity:** Do other actors address the social problem identified by the SI? If so, are the offerings of these other actors competitive or complementary to the offerings of the SI?
- **Outcomes:** How much would the organisation earn from the activities of the SI? How much would the welfare state or companies or other social actors benefit (e.g. in form of savings or reaching formerly unreachable groups) from the activities of the SI?

Regarding principles, micro-level indicators of SI should primarily ease the assessment of the organisational context of the SI, its processes, its effectiveness and efficiency, and its business model and governance. As the case studies of SIMPACT have revealed, many SIs are not aware of their dependence on certain partners and of the risks the initiative is aligned with. This unawareness often results in problems to optimise processes, decision-making, resource allocation, quality assurance and to find an adequate legal form for the SI. Micro-level indicators of the economic impact and sustainability of SIs at the principles level should cover the following aspects and questions:

Principles-related SI indicators

- **Organisational dependencies:** What legal form has been chosen by which criteria? On what partners / external actors does the SI rely? Are the roles of these organisations clear? Is there awareness of/a plan for how the relationships to these organisations change over time? Are there means or plans to reduce the dependency on external organisations?
- **Technological dependencies:** Does the SI rely on any technological innovation?

- **IPR:** Does the SI have (the potential for) ownership of any intellectual property? Does the SI rely on IPR of third parties?
- **Organisational development:** Are development stages defined and criteria identified that help to decide when the SI should move (in both directions) from one stage to another? Are there clear rules for decision-making and conflict resolution?
- **Scale:** How many people are affected by it?
- **Scope:** What is the geographical scope of the target groups that can be served by the SI?
- **Scaling:** Is there an opportunity for scaling the SI up or down if the “market” conditions change over time?
- **Risk assessment:** Are potential risks identified and mitigation strategies developed?
- **Sustainability/revenues:** Can (a part of) the target groups pay for goods or services offered by the SI? Is there an additional target group that can afford paying for (additional) goods or services provided by the SI? Would public authorities or foundations finance the SI? For what period of time and what purposes would public funding or funding from foundations be available? Is there a plan how financing of the SI may change over time, at different development stages?
- **Quality assurance:** Are there means (e.g. user feedback) to evaluate quality of the provided goods/services and to improve quality if necessary?
- **Monitoring:** Are there means in place that help the actor to monitor and evaluate the development and outcomes of the SI with regard to its objectives?

#### Component-related SI indicators

Regarding components, micro-level indicators of SI should primarily ease the assessment of the regulatory context of the SI. Regulatory limitations and opportunities are at the focus in this regard. Micro-level indicators of the economic impact and sustainability of SIs at the components level should cover the following aspects and questions:

- **Regulatory actors:** Have regulatory actors been identified and has their (potential) role (supporting/hampering) for the SI been clarified? Are conditions under which support from these actors is provided or refused or discarded clarified?
- **Policy coherence:** Does the SI explicitly directly address objectives or targets identified in local or national policy frameworks? Does the SI contra-

dict such policy frameworks? Is the SI aware of the criteria by which political actors would evaluate the success of the SI? Would the SI be allowed to affect such policy frameworks?

SIs are usually aware of the importance of the policy context in which they operate, though mostly within a limited perspective. Many SIs respond to social problems that are not efficiently addressed by social policy and for many SIs public bodies play a vital role for financing. However, hardly any SI undertakes efforts to systematically evaluating its policy context with regard to the supportiveness of the organisations goals and business model.

As the results of SIMPACT show, public policy is excessively focused on short term funding, quantifiable outcomes, political fashion and media impact (Totterdill et al., 2015). This often results in limited impact on “landscape change”, weak core capacity in NGOs, a preference for bureaucracy instead of policy entrepreneurship, a dominance of transactional instead of transformational dialogue, few spaces for innovation, conservative interventions, and the undervaluation of intangible outcomes (ibid.). An SI should therefore carefully check its policy context with regard to following aspects (Totterdill et al., 2015):

- Are public organisations fit for purpose, especially with regards to organisational structures, staff empowerment and entrepreneurial behavior?
- Are modes of policy production (bureaucratic, programmatic or open) fit for purpose?
- Are service users considered as active partners?
- Does the relation between public bodies and the SI allow for creating a shared vision, a common understanding of each partner’s role, and transformational dialogue that values difficult questions and allows for taking risks?

An example of a practical approach incorporating the requirements laid out above is provided by the New Economics Foundation (NEF). They present an array of indicators<sup>4</sup> on micro and macro levels. The indicators provided target individuals, communities, the environment and the economy.

At the individual level, NEF suggested that indicators cover; well-being, skills development, health, and high-risk behaviour. In order to measure a social invention’s impact on an individual’s well-being, NEF suggests a model of well-being with two personal and one social dimension. The personal dimensions are people’s satisfaction with their lives (including work) and their sense of personal development.

---

<sup>4</sup> <http://www.proveandimprove.org>

Public policy

Example:  
New Economic  
Foundation

The social dimension shall capture people's social well-being as indicated by "belonging to their communities, a positive attitude towards others, feeling that they are contributing to society and engaging in what could be called 'pro-social behaviour'."

People's own assessment of their satisfaction with their life is a fundamental indicator for all sorts of methods geared towards measuring people's well-being. Such measures are usually accompanied by questions about the extent to which people are affected by feelings of fear/anxiety, guiltiness, sadness, happiness, excitement, confidence or interestedness<sup>5</sup>.

Finally, according to the NEF, indicators of well-being have to include a measurement of the extent to which people feel themselves belonging to a community which members they trust and to which they contribute. Also desirable are the additions of a number of questions capturing people's relationships to partners, family, friends, and other people, as well as questions to measure people's satisfaction with their jobs, voluntary work, leisure activities, and their perceived feeling of safety.

In order to measure the impact of an SI on an individual's skills development and profile, e.g. through training courses that aim to increase the individual's attractiveness to an employer and of its self-confidence and well-being, NEF suggests a range of questions that should help demonstrating that a change has happened.

#### Peoples' skills & competence

These questions cover increasing people's skill/competence in social interaction, increasing personal effectiveness and aptitude and life skills, and increasing 'basic' work skills and attributes:

1. Indicators targeting people's skills and competence in social interaction ask for:
  - Relationships with peers
  - Relationships with people in 'authority' positions
  - Ability to work in a team with other people
  - Increase in social networks
  - Increase in tolerance of others' differences.
2. Indicators of personal effectiveness and aptitude and life skills ask for:
  - Improved ability to plan
  - Improved ability to prioritise
  - Ability to reason verbally
  - Numerical reasoning
  - Increased problem-solving skills

---

<sup>5</sup> A methodological "gap" not identified by other initiatives, and addressed by us in section 6.

3. Indicators of 'basic' work skills and attributes as for:
- Attainment of basic literacy (reading, writing)
  - Basic numerical skills, including ability to manage money
  - Timekeeping, reliability
  - Ability to complete forms
  - Completion of a CV
  - Improved presentation skills
  - Appearance suitable to the workplace

Given the complexity of people's health, for health indicators NEF suggests a combination of self-reported and directly observed indicators in order to get a more holistic picture of a person's physical or mental health, including physical and mental health as well as an individual's private and social behaviours (e.g. substance abuse and preventive measure) that affect their health. Indicators in this regard may ask for the person's rating of his/her health, visits to GP or other medical care, weight (gained or lost as needed), improvement of condition that was present upon referral or entry to the organisation, or for specific problems such as tiredness/fatigue, poor appetite, nausea and the like.

Self-reported & directly observed indicators

Furthermore, indicators measuring peoples' high risk behaviour cover patterns of behaviour that result in harm to themselves or to other people. Such patterns may be expressed through drug or alcohol abuse, risky sexual behaviour, or behaviour aligned with poor living conditions (e.g. homelessness).

Patterns of behaviour

The indicators suggested by NEF refer to a number of tested and publically available methods and instruments, such as NEF's well-being manifesto, the Maudsley Addiction Profile (MAP) , and the Christo Inventory for Substance-misuse Services (CISS) Many of these indicators measure people's well-being through a series of questions that must be answered by the respondents on a Likert scale.

#### 4.4 Macro-level of Regions & Countries

Economic metrics and the resulting indicators at the macro level are normally abundant and of high quality at the national level in the form of national accounts and other more dedicated national data. This is especially true for most, if not all, European Union member states and OECD member states. In recent years the European Union and the OECD, have been gearing their data collection more and more towards regional collection of which the well-known NUTS classification is an exponent. The use of survey such as the Community Innovation Survey<sup>6</sup>, for the European Union, and its spin-off innovation panels in several other (OECD) countries

National accounts

---

<sup>6</sup> See EUROSTAT: <http://ec.europa.eu/eurostat/web/microdata/community-innovation-survey>

have also produced high quality data on the dynamics of innovation. These metrics are used, among others, in scoreboards like the Union Innovation Scoreboards<sup>7</sup>, capturing innovation using a broad economic framework.

As mentioned throughout this report the capturing of the social dimension of innovation has not been an integral part of this effort, but we have also seen the possibilities for a future inclusion. This could be affected by the inclusion of metrics from surveys such as the one feeding the OECD Better Life Index<sup>8</sup>, or the European Social Survey<sup>9</sup>. This last survey also uses a mixed methodology which potentially could be the way forward in collecting contextual data on the social dimension of innovation whilst preserving the earlier economic focus.

The project ITSSOIN: 'Impact of the Third sector as SI' takes as key indicators to measure the potential (supply-side) of SI the size of the third sector and the share of volunteers in the third sector (Table 8).

Table 8. Paid employees and volunteers as a share of third sector workforce (FTE), in %

Country (Year)	Paid employees (%)	Volunteers (%)	Change paid employees (since year)
Czech Republic (2011)	79	21	+18% (2005)
France*	65	35	
Germany (1995)	62	38	
Netherlands (1995)	62	38	
Spain (2002)	59	41	- 9% (1995)
<b>Median</b>	<b>59</b>	<b>41</b>	
Denmark (2004)	56	44	
Italy*	55	45	
United Kingdom	50	50	
Sweden (2002)	22	78	+/- 0% (1992)

(\*) Country data is based on estimates in unpublished material

Source: Anheier et al. (2014)

### Macro-level indicators

Perhaps the most comprehensive set of indicators for SI at macro level has been suggested by the earlier mentioned TEPSIE project. However, in practice it still is to a large extent a wish-list for indicators, since data is not available for every country in Europe, and the definitions of the available data are often not comparable. The quantification effort for SI will need to fall back on the more readily available

<sup>7</sup> See European Commission: [http://ec.europa.eu/growth/industry/innovation/facts-figures/scoreboards/index\\_en.htm](http://ec.europa.eu/growth/industry/innovation/facts-figures/scoreboards/index_en.htm)

<sup>8</sup> See OECD: <http://www.oecdbetterlifeindex.org/>

<sup>9</sup> See Norwegian Social Science Data Services (NSD) and: <http://www.europeansocialsurvey.org/>



metrics, which can be adapted and interpreted for use in a “landscaping” to discover the potential and propensity to Socially Innovate in the EU28. In addition to the TEPSIE framework, we would like to give more attention to the differences in the demand for SI, which in the TEPSIE model (which is focusing on the supply-side of SI) has been hidden under ‘frame-work conditions’.

Table 9. TEPSIE Structure of the blueprint of SI indicators

<b>Framework Conditions</b>	Resources Framework	Financial Resources Human Resources Infrastructural Resources
	Institutional Framework	Normative Institutions Regulative Institutions Cultural-cognitive institutions
	Political Framework	Policy Awareness about SI Political Environment
	Societal Climate Framework	Social Needs/Demands as reference point for SI Social Engagement/Attitudes
<b>Entrepreneurial Activities</b>	Investment Activities	Expenditure in Innovation by SI Expenditure in Innovation by Public Sector
	Start-ups Activities	Start-ups and Death Rates of Firms dedicated to a social purpose Business Environment for Starting a Business
	Collaborative & Network Activities	Citizens’ Involvement in social entrepreneurial activities Cluster Development
<b>Organizational Output / Societal Outcome</b>	Education	Equality Opportunities/Inequalities Skill Acquisition
	Health & Care	Access/Quality of Health Facilities Health Status & Research
	Employment	Jobs & Earnings Work & Life
	Housing	Housing Situation Access & Quality
	Social Capital & Networks	Frequency & Quality Social Cohesion
	Political Participation	Voting & Being Informed Citizens’ active Involvement
	Environment	Patents & Certificates Preservation of Natural Capital

Source: Krlev et al. (2014)

Still, most of the sub-headings of this framework provide the key indicator set to measure SI. This framework suggested by the TEPSIE project (Hubrich, 2012) and a follow up paper by Krlev et al. (2014) consists of economic, socially orientated, and more general (including technological and business) innovation oriented

macro indicators, (see Table 9). In the next paragraph this indicator-set has been refined: e.g. more focused on SI, and the demand for SI has been captured more prominently. Moreover, indicators have been chosen for which data has a good coverage for the EU.

## 4.5 Suggested Indicator Sets

There is even scope for applying an indicator set at the regional level, for some indicators data is even available at NUTS3 level. Since SI mostly takes place in a local context, the regional level seems very relevant. Also the inclusion of more contextual, qualitative and quantitative, data is an option through use of sources such as the earlier mentioned European Social Survey and a deeper interpretation of the data provided by standard, but highly relevant, sources such as the EU Statistics on Income and Living Conditions (SILC) and the EU Labour Force Survey (LFS). The resulting indicator set of macro-level indicators is presented below in different organisational forms.

In Table 10 below we show a categorisation of the SI components, objectives and principles as presented in section 3.2, and the suggested metrics that are able to inform on these elements of SI.

Table 11 displays the suggested indicator set of macro-level indicators in the form as the above presented blueprint of TEPSIE. The main indicator headings refer to economic and social resources or capital: Labour, Financial capital, Public Capital, Knowledge, Social Capital, and Health. Since SIMPACT does not have a thematic focus on SIs addressing health, this last module is less relevant for the SIMPACT analysis. A distinction has been made between indicators capturing SI potential (or supply) and those indicating SI needs or demand-side, which both indicates the objectives (as aimed output), but also serves as output-indicators. Also a distinction between tangible and intangible indicators is made. The contribution to the potential or needs may come from either the public, private, or civic/third sector.

In a next table (Table 12) the focus is on the tangible aspects, or at least those aspects which can be monetised/capitalised, and they are presented in a use table or a sort of input-output table with SI enablers on the one side of the matrix, and SI beneficiaries on the other side.

Table 13 displays the indicator questions which have been used to standardise the characteristics of the various aspects of SI at the micro-(meso) level of SI projects and case studies as they have been empirically covered by SIMPACT in work package 3.

Table 14 shows in a 2x2 matrix the link between the above mentioned set of macro-indicators (for countries and regions in Europe) and the micro-level indicators collected for the SI case-studies of SIMPACT. The indicators are again differentiated between tangible and intangible aspects of SI.

Table 10. A categorisation of Social Innovation components, objectives and principles, and possible metrics (using existing data sources)

SOCIAL		ECONOMIC		POLITICAL		
Description	Metrics	Description	Metrics	Description	Metrics	
<b>SI Components</b>						
TYPES OF SI ACTORS	Informal: e.g. citizens initiating civil society projects; crowds; foundations	Crowdfunding Analytics World Giving Index DAFNE; Charities and Foundations data	Social entrepreneurs;	Third Sector Impact; ITSSOIN Start-ups: LMP expenditure by type of action: EUROSTAT Imp_expsumm	Political decision makers at:	Public employment statistics per country, per ministry.
	Formal: NGOs, associations	Union of International Organisations database	For-profit-companies;	High growth enterprises (NUTS3) in NACE Rev 2 Q88: Social Work Activities: Eurostat	Local, regional, national, European, global level	Public employment statistics per country, per ministry.
	Education	Educational attainment: Eurostat: Population by educational attainment level, sex and age (%); edat_ifs_9903 Eurostat: Early leavers from education and training; edat_ifse_14	Public enterprises	Structural Business Statistics; EUROSTAT; t_sbs		
			PPPs	World Bank PPP in Infrastructure database		
SI RESOURCES	Social /relational capital	World Values Survey European Social Survey; Number of volunteers EU Tax and Benefits database: People wanting to work	Production factors: labour, capital, land, knowledge.	Economically active population by sex, age, etc. EUROSTAT: Ifst_r_lfp2acedu	Social & human rights; Right to vote	Human Right data: Human Rights Watch, CIRI Human Rights Project. Freedom of Information Gender equality; unemployment by sex, job mobility, People at risk of poverty; EUROSTAT ilc_peps01
	Means of protest /leadership	PewResearchCenter			Ideologies	PewResearchCenter

	SOCIAL		ECONOMIC		POLITICAL	
	Description	Metrics	Description	Metrics	Description	Metrics
SI INSTITUTIONS	Culture	Eurobarometer survey EUROPE LIST: On the search for a European culture	Markets	Annual sector accounts: EUROSTAT: t_nasa	Education system;	Pupil-teacher ratio in primary, lower and upper secondary education. EUROSTAT; educ_iste Number of educational institutions per capita etc.
	Traditions	Eurobarometer survey	Sector rules	OECD Product Market Regulation Statistics	Welfare system; Laws and political structures;	Individuals reliant on social security benefits;
	Conventions	Eurobarometer survey	Milieus		Participation rights	World Values Survey European Social Survey
	Legitimacy	Eurobarometer survey				

### SI Objectives

SI MOTIVES/OBJECTIVE (aimed impact)	Empowerment;	World Values Survey European Social Survey	Profit maximisation	Annual sector accounts: EUROSTAT: t_nasa	Welfare maximisation	
	Participation;	World Values Survey European Social Survey	Pareto-optimum		Inclusion	ESS indicators: Trust in Parliament TRSTPL, Trust in Legal System TRSTGL etc.
	Social cohesion	World Values Survey European Social Survey People at risk of poverty & social exclusion; EUROSTAT ilc_peps01			Discharge of public budget	Expenditure on social protection, Structure of social protection expenditure. Expenditure on care for the elderly, etc. EUROSTAT; spr_exp_sum
	Equity	World Values Survey European Social Survey			Legitimation	

### SI PRINCIPLES

SI EFFICIENCY (dilemma's)	Unclear what efficiency means (in relation to economic and political)	Governance Effectiveness/Efficiency; Regional Innovation Monitor Survey, indicator RIM_GOV_EFF	Internal as well as external efficiency	Governance Effectiveness/Efficiency; Regional Innovation Monitor Survey, indicator RIM_GOV_EFF	Short term vs long term	Governance Effectiveness/Efficiency; Regional Innovation Monitor Survey, indicator RIM_GOV_EFF
	Contextual embedded vs. de-contextualised diffusion		Static vs dynamic efficiency		Autonomy vs public funding dependency	
			Competition vs collaboration			

---

SI GOVERNANCE (modes)

With or without govern-  
ment

With or without govern-  
ment

Public regulation

---

Table 11. Macro-level (national and regional) Indicator set for SI, with EU data sources

		Tangible	Intangible
<b>Labour</b>	SI POTENTIAL	<b>Number of workers in human health and social activities (NACE R2, Q)</b> Available: Eurostat table lfsq_egan2	<b>Voluntary work: Unpaid work social welfare service</b> Available: European Values Survey Variable A081
	SI NEEDS	<b>Long-term unemployment rates by sex, age and citizenship</b> Available: Eurostat table lfsq_urgan	
		<b>Inactive population by sex, age and willingness to work</b> Available: Eurostat table lfsq_igaww	<b>Job satisfaction</b> Available: European Values Survey Variable C033
<b>Financial Capital</b>	SI POTENTIAL	<b>GDP at market prices</b> Available: Word Bank, WDI Tables	
		<b>Government expenses – providing goods and services (% of GDP)</b> Available: Word Bank, WDI Tables	<b>Total expenditure of charities and foundations</b> Available: DAFNE Donors and Foundations Network Europe
		<b>Total public expenditure on social benefits</b> Available: Eurostat table tps00102	
		<b>Innovative enterprises that receive public funding as a % of total</b> Available: Eurostat table htec_cis6	<b>Starting a Business</b> Available: World Bank, Doing Business Data
		<b>Number of Start-ups: Business demographics main variables</b> Available: Eurostat table tin00170	
	SI NEEDS	<b>Central government dept, total (% of GDP)</b> Available: Word Bank, WDI Tables	
		<b>Enterprise death rates: Business demography main variables</b> Available: Eurostat table tin00170	
		<b>People at risk of poverty or social exclusion</b> Available: Eurostat table tipslc10	<b>Claiming state benefits which you are not entitled to</b> Available: European Values Survey Variable F114
		<b>Housing cost overburden rate by age group</b> Available: Eurostat table tessi161	
<b>Public Capital</b>	SI POTENTIAL	<b>Infrastructure Investment</b> Available: OECD doi:10.1787/b06ce3ad-en	
		<b>Level of internet access – households</b> Available: Eurostat table tin00134	

		Tangible	Intangible
		<b>Government Expense – providing goods and services (% of GDP)</b> Available: Eurostat table tin00134	<b>Mode of transport – Typically most often uses</b> Available: Eurobarometer 82.2 (Oct 2014) Variable qa1
	SI NEEDS	<b>Quality of Government</b> Available: European Quality of Government Index (EQI)	<b>Internet subscription – main factor</b> Available: Eurobarometer 81.1 (Jan 2014) Variable qb7a
		<b>Modal split of passenger transport</b> Available: Eurostat table tran_hv_psmo	<b>Mode of transport reason: No alternative</b> Available: Eurobarometer 82.2 (Oct 2014) Variable qa2.7
Knowledge Capital	SI POTENTIAL	<b>Total public expenditure on education</b> Available: Eurostat table tps00158	
		<b>Employment by sex, occupation and educational attainment</b> Available: Eurostat table lfsa_egised	<b>Lifelong learning</b> Available: Eurostat table tsdsc440
		<b>Research on SI (publications &amp; patents)</b> Available: Patstat, Scopus and EU OpenAIRE	<b>Young people’s social origin, educational attainment level and labour outcomes</b> Available: Eurostat table edat_lfso_00t3
	SI NEEDS	<b>Early leavers from education and training, age group 18-24</b> Available: Eurostat table tesem020	<b>Improve knowledge/skills: last 12 months</b> Available: ESS7-2014, Variable atncrse
Social Capital	SI POTENTIAL	<b>Total expenditure on social protection by type (% of total expenditure)</b> Available: Eurostat table tps00101	<b>Feel concerned about: People in the neighbourhood</b> Available: European Values Survey, Variable E154
		<b>Membership of a social welfare service, organisation, charity</b> Available: European Values Survey, Variable A064	<b>Prepared to help people in the neighbourhood</b> Available: European Values Survey, Variable E164
	SI NEEDS	<b>Quality of Government</b> Available: European Quality of Government Index (EQI)	<b>Trust in country’s parliament</b> Available: ESS7-2014, Variable trstpr1
		<b>Gender differences in the at-risk-of-poverty rate</b> Available: Eurostat table ilc_pnp9	<b>Trust in the legal system</b> Available: ESS7-2014, Variable trstlgl
	<b>Immigration</b> Available: Eurostat table tps00176	<b>Trust in people</b> Available: ESS7-2014, Variable ppltrst	
Health	SI POTENTIAL	<b>Expenditure of providers of health care by financing agents in health care</b> Available: Eurostat table hlth_rs_prsrg	



	Tangible	Intangible
	<b>Health personnel by NUTS 2 regions</b> Available: Eurostat table hlth_rs_prsrg	<b>Subjective general health</b> Available: ESS6-2012, Variable health C7
SI NEEDS	<b>Self-reported unmet needs for medical examination by sex, age, detailed reasons and income qunatile</b> Available: Eurostat table tgs00064	<b>Hampered in daily activities by illness/disability/infirmity/mental problem</b> Available: ESS7-2014, Variable hltphnap

Table 12. Indicators on tangible or monetisable aspects of SI in a use table, an indicative input-output exercise on SI enablers and SI beneficiaries.

Use table of Tangible SI		SI Beneficiaries																
		needs	Labour		Financial Capital					Public Capital		Knowledge Capital	Social Capital			Health		
SI Enablers	potentials		Longterm unemployment rates by sex, age and citizenship	Inactive population by sex, age and willingness to work	Central government debt, total (% of GDP)	Enterprise death rate: Business demography main variables	People at risk of poverty or social exclusion	Housing cost overburden rate by age group	Government Expense - providing goods and services (% of GDP)	Level of internet access - households	Modal split of passenger transport	Early leavers from education and training, age group 18-24	Quality of Government	Gender differences in the at-risk-of-poverty rate	Immigration	Self-reported unmet needs for medical examination by income quintile	Available beds in hospitals by NUTS 2 regions	
	Labour	Nr of workers in human health and social activities (NACE R2,Q)	v	v			v							v		v	v	
	Financial Capital	GDP at market prices				v			v									
		Total public expenditure on social benefits	v					v	v				v		v	v	v	v
		Innovative enterprises that receive public funding as a % of total	v	v			v	v		v			v		v	v		
		Number of Start-Ups: Business demography main variables	v	v			v	v		v			v		v	v		
	Public Capital	Infra-structure Investment						v			v			v	v	v		
		Quality of Government	v	v			v	v	v	v	v	v		v	v	v	v	v
		Government Expense - providing goods and services (% of GDP)	v	v				v	v		v	v	v	v	v	v	v	v

SI Enablers	Knowledge Capital	Total public expenditure on education					v					v						
		Employment by educational attainment level	v	v			v					v		v	v			
		Research on Social Innovation (Publications and Patents)				v	v		v									
	Social Capital	Total expenditure on social protection by	v	v			v	v					v	v	v	v	v	
		Membership of a social welfare service, organisation, charity	v	v			v						v	v	v	v	v	
	Health	Expenditure of providers of health care by financing agents in health care	v				v								v		v	v
		Health personnel by NUTS 2 regions	v	v			v		v					v	v	v	v	v

<b>Themetic field</b> (Problem addressed)	Employment (1) Migration (2) Demographics (3) Gender (4) Education (5) Poverty								
Targetgroup	Unemployed (1) young unemployed (2) migrants (3) children (4) elderly (5) other (6)								
Country									
<b>Scope Geographical</b>	local(1), Regional (2), National (3), Europa (4) global (5)								
Name of Region (NUTS2 code)									
<b>Development stage</b>	Ideation (1) Prototyping (2) Implemented (3) Scaled (4) Discarded (5)								
<b>Prospects for expansion</b>	very high high moderate low very low								
What <b>type of organisation</b> is the Social Innovator?	Association (1) Social Enterprise (2), Foundation (3), NGO (4), Other (5)								
What <b>type of Social Innovation</b> is it?									
New Product/service	no (1) yes (2)								
New market/ or targetgroup	no (1) yes (2)								
Organisational innovation	no (1) yes (2)								
New method, process-innovation	no (1) yes (2)								
New inputs (expertise, ICT, design-skills, material, etc.)	no (1) yes (2)								
How would you rate the Social Innovator's internal <b>knowledge base</b> on the theme and targetgroup	very high high moderate low very low (1)								
How would you rate the SI's use of external knowledge on the theme and targetgroup?	very high high moderate low very low								
How would you rate the business knowledge, and management capabilities of the Social Innovator?	very high high moderate low very low								
About how many <b>actors</b> are involved in the inner core of the Social Innovation									
About how many organisations collaborate as partners, promoters, and supporters of the social innovation?									
How would you rate the diversity of the actors involved?	very high high moderate low very low								
<b>Funding&amp; finance</b>									
Rate the extent to which the social innovation generates revenues/sales?	very high high moderate low very low not at all								
What kind of organisation is the <b>main Funder</b> ?	Individual (1) non-governmental & third sector organisation (2), informal organisation (3)								
Funder 2	No second funder (0) Individual (1) non-governmental & third sector organisation (2), inf								
Funder 3	No third type of funding (0) Individual (1) non-governmental & third sector organisation (								
<b>Please rate the Importance of objectives</b>									
Correcting a market failure in serving un-met needs of targetgroup	very high high moderate low very low not at all								
Complementing public policy in serving un-met needs	very high high moderate low very low not at all								
Business opportunities (increase revenues/profit)	very high high moderate low very low not at all								
Increase the economic value of capabilities of the targetgroup (e.g. Employability, work-skills)	very high high moderate low very low not at all								
Increase the personal & social value/capabilities of the targetgroup (e.g. Empowerment, health, life-skills, self-confidence)									
Increase the public value/capabilities of the targetgroup (social cohesion, inclusion, lobbying, legitin	very high high moderate low very low not at all								
<b>Rate the importance of the following resources (and activities)as inputs</b>									
Knowledge (e.g. from experts, knowledge institutes, students)	very high high moderate low very low not at all								
Labour	very high high moderate low very low not at all								
Capital/funding	very high high moderate low very low not at all								
Social capital (engagement, volunteering)	very high high moderate low very low not at all								
Relational capital, resources, networking	very high high moderate low very low not at all								
Training, education	very high high moderate low very low not at all								
Political support	very high high moderate low very low not at all								

<b>rate the likely achieved outcomes /outputs of the SI</b>						
Increased life skills of the <b>marginalised</b>	very high	high	moderate	low	very low	none
Increased working skills of the marginalised	very high	high	moderate	low	very low	none
Increased physical capabilities of the marginalised	very high	high	moderate	low	very low	none
Increased other capabilities of the marginalised	very high	high	moderate	low	very low	none
Improved networks of the marginalised	very high	high	moderate	low	very low	none
Improved self-confidence of the marginalised	very high	high	moderate	low	very low	none
Employment of the marginalised	very high	high	moderate	low	very low	none
Improved income/less costs for the marginalised	very high	high	moderate	low	very low	none
Increased capabilities of the <b>Social Innovator</b>	very high	high	moderate	low	very low	none
Increased management capabilities	very high	high	moderate	low	very low	none
Increased marketing capabilities	very high	high	moderate	low	very low	none
Improved networks of the Social Innovator	very high	high	moderate	low	very low	none
Improved self-confidence of the SI	very high	high	moderate	low	very low	none
Employment growth at the SI	very high	high	moderate	low	very low	none
Improved revenues/less costs for the SI	very high	high	moderate	low	very low	none
Reduced <b>public budget</b> costs	very high	high	moderate	low	very low	none
Other complements to public policy	very high	high	moderate	low	very low	none
Other benefits for private partners	very high	high	moderate	low	very low	none
Other civic outcomes/benefits	very high	high	moderate	low	very low	none
How would you rate the <b>importance of obstacles?</b>						
Financial	very high	high	moderate	low	very low	none
Organisational/logistical	very high	high	moderate	low	very low	none
Legal	very high	high	moderate	low	very low	none
Political	very high	high	moderate	low	very low	none
Societal/cultural	very high	high	moderate	low	very low	none
Market share (competition)	very high	high	moderate	low	very low	none
Technological	very high	high	moderate	low	very low	none
How would you rate the <b>long-term outlook</b> of the SI on a scale of 10						

Table 13. Main survey questions addressed by the SI cases of SIMPACT

Table 14. The combined sets of micro- and macro-level of indicators for SI, for intangible and tangible aspects

	Micro-level indicators for SI cases	Macro-level SI indicators for countries/regions
<b>Intangible</b>	<p>Type of SI (SI)</p> <p>SI's internal knowledge base on the theme and target group</p> <p>SI's business knowledge, and management capabilities</p> <p>SI's use of external knowledge on the theme</p> <p>Aim to complement public policy in serving un-met needs</p> <p>Aim to increase the personal &amp; social value/capabilities of the target group (e.g. Empowerment, health, life-skills, self-confidence)</p> <p>Aim to increase the public value/capabilities of the target group (social cohesion, inclusion, lobbying, legitimization)</p> <p>Number of actors involved</p> <p>Diversity of actors involved</p>	<p>Quality of Government</p> <p>Claiming state benefits which you are not entitled to</p>
	<p>Knowledge (e.g. from experts, knowledge institutes, students) as input</p> <p>Social capital as input( volunteers)</p> <p>Relational capital as resource input (network)</p> <p>Training, education as resource input</p> <p>Political support as input</p> <p>ICT as input</p> <p>Increased life skills of marginalised: output</p> <p>Increased working skills of the marginalised</p> <p>Increased physical capabilities mrgn.</p> <p>Increased other capabilities mrgn.</p> <p>Improved networks of the mrgn.</p> <p>Improved self-confidence mrgn.</p> <p>Increased management capabilities of Social Innovator (as output)</p> <p>Increased marketing capabilities of SI</p> <p>Increased other capabilities of SI</p> <p>Improved networks of the Social innovator</p> <p>Improved self-confidence of the SI</p> <p>Other complements to public policy</p>	<p>Young people's social origin, educational attainment level and labour outcomes; Immigration</p> <p>Research on SI (publications)</p> <p>Voluntary work: Unpaid work social welfare service; Prepared to help people in the neighbourhood</p> <p>Feel concerned about: People in the neighbourhood; Trust in people</p> <p>Lifelong learning</p> <p>Level of internet access – households/Internet Subscription</p> <p>Inactive population by sex, age and willingness to work</p> <p>Improve knowledge / skills: last 12 months</p> <p>Subjective general health; Hampered in daily activities by illness/disability/infirmary/mental problem</p>

	Micro-level indicators for SI cases	Macro-level SI indicators for countries/regions
	Other benefits for private partners Other civic outcomes/benefits Legal obstacle to innovation Political obstacle	Membership of a social welfare service, organisation, charity
	Societal/cultural obstacle Market share (competition) obstacle Organisational/logistical Technological obstacle	Trust in the legal system Trust in country's parliament; Quality of Government Starting a Business (World Bank, Doing Business Data)
		Mode of transport reason: No alternative
<b>Tangible</b>	SI generates revenues/sales? Main type of Funder of SI?	(Size of third sector, % of GDP)
	Aim to correct a market failure in serving un-met needs of target group	Innovative enterprises that receive public funding as a % of total Total public expenditure on social benefits; Expenditure of providers of health care by financing agents in health care
	Aim for Business opportunities (increase revenues/profit) Aim to increase the economic value of capabilities of the target group (e.g. Employability, work-skills) Labour input	GDP at market prices
	Capital/funding input	Total public expenditure on education
	Employment of the marginalised as output	Nr of workers in human health and social activities (NACE R2, Q); Health personnel by NUTS 2; (Size of third sector, employees) Total expenditure on social protection by type, % of total expenditure Total expenditure of charities & foundations
	Improved income/less costs for the marginalised as output	Long-term unemployment; Employment by sex, occupation and educational attainment. People at risk of poverty or social exclusion Housing cost overburden rate by age group (growth of third sector, employment)
	Employment growth at the SI as output	(Growth of third sector, % of GDP)

Micro-level indicators for SI cases	Macro-level SI indicators for countries/regions
Improved revenues/less costs for the SI as output Reduced public budget costs as output Financial obstacle to innovation	Central government debt Number of Start-Ups: Business demography main variables Enterprise death rate: Business demography main variables
Long-term outlook	



## 5 EVALUATION AND IMPACT ASSESSMENT OF SOCIAL INNOVATION

### 5.1 SI Impact Measurement Tools & Methods

Although it is mostly focused on the investment framework for addressing social needs, and not specifically on innovation, the above Figure 11 does give us a clear idea which SI actors could provide us with data and indicators that could play an important role in our measurement framework. We can see supply and demand side actors as well as the services/products for which investment is necessary in terms of social needs e.g. societal problems. We find that for the social needs or societal problems environment the characteristics of the beneficiaries, the target areas (of needs and problems) and the access to products/markets and services are of importance. The actors reacting to these needs and problems are on the demand side and are characterised by their intent to deliver solutions but also by a justification of the use of these solutions through monitoring and measuring the impact of their innovations. On the supply side the main characteristic is the expectation that the demand side goals are achieved and that there is some kind of social return (shared value). In addition, the investors' intent is an important characteristic here. The intermediaries are in essence no more than transactional bodies translating the demand side needs into requests for the supply side while putting these into a regulatory framework. This brings us to the social-economic system, which is the enabling environment dictating the way these transactions are conducted as well as the social and cultural appropriateness of the demands and innovations e.g. solutions.

SI supply and demand actors

As we discovered in section 3.3.3, the key to measuring the impact of SI is to identify the use value of SI interventions. However, as Wood & Leighton (2010: 20) point out, "social value' refers to wider non-financial impacts of programmes, organisations and interventions, including the wellbeing of individuals and communities, social capital and the environment. These are typically described as 'soft' outcomes, mainly because they are difficult to quantify and measure."

Measuring SI impact

Though measuring the social and economic impact of SIs has become an important task (see, for instance, Pol & Ville 2008) there is no commonly accepted method or standard to perform this task efficiently. Wood & Leighton (2010: 20-21) name about 30 different models used to measure social value within the UK and the USA, thereby observing a "fragmented, 'bottom-up' and somewhat ad-hoc approach to

measuring social value”. They refer to a non-exhaustive overview of quality and impact measurement tools provided by Angier-Griffin (2009). They point out that different tools have been developed to support different approaches to measuring social value and that these different tools reflect the different methodological approaches chosen (See Figure 14.). The authors distinguish four different key approaches towards social value/impact measurement:

1. *“a ‘whole organisation’ approach or a ‘project based’ approach. The whole organisation approach seeks to account for social value across the whole of an enterprise and is mostly commonly based upon a stakeholder approach. A project based approach is concerned with appraising the social value of a particular project or activity (usually in order to account for that social value to a funder or commissioner)*
2. *use of ‘soft outcomes’ or use of ‘financial proxies’. Some tools seek to demonstrate social value by demonstrating the economic benefit of particular social, environmental or well-being outcomes. Other tools use social science techniques to the measure and report the social outcomes using ‘soft indicators’ (e.g. attitudinal responses, behavioural indicators, opinions of service users)*
3. *‘self reported’ or ‘independently verified’. Independent verification can be expensive. Thus in some cases it may be both appropriate and most cost-effective to measure and report social value based upon audited data. In other contexts, the authority of external validation against agreed standards may be an essential part of the process.*
4. *a fourth dynamic is scale. Tools designed for use within a large multinational (e.g. Global Reporting Initiative, AA1000) will not be appropriate for use by smaller emerging social enterprises.*

**Level of complexity  
& necessary re-  
sources**

Concluding, Angier-Griffin maps these different tools and methods along two dimensions (see Figure 14.): “The horizontal axis represents the level of complexity and resources required to use the tool. The vertical axis represents the reported results in terms of economic impact (what is the benefit of social value created measured in economic terms) versus social impact (what is the benefit social value created measured against indicators of well-being and quality of life) (Angier-Griffin.com 2009).”

### **5.1.1 Social Accounting & Auditing (SAA)**

Social accounting and auditing (SAA) is an earlier attempt by (commercial) organisations, introducing CSR principles and measures, and wanting to provide metrics for these measures with the earmark of being able to justify these measures to their stakeholders e.g. shareholders. SAA is used for social impact reporting departing

from a welfare economics inspired premise that an alternative social good/innovation can be “priced” at what a beneficiary would be willing to pay for it, allowing inputs and outputs to be compared in a traditional way. However, as SI takes place in a space in which normal markets have failed to perform, there are no comparable products (Nicholls, 2009) and as such it is extremely difficult to monetise many of the SIs implemented and innovative services rendered.

Nevertheless, it is important to take note of some of the SAA frameworks/systems developed. For instance, the IRIS system<sup>10</sup>, developed and maintained by the Global Impact Investment Network (GIIN) has a sizeable set of metrics on which they gather data and parts of which are of interest. Furthermore, these SAA principles have also been applied to the setting of (philanthropic) non-profit foundations, bringing with them a useful crossover of monetisation to “valuation” of the earlier mention “Use value” or shared value. In the below Figure 12 we can see that next to cost-effectiveness and cost-efficiency exercises, practitioner and beneficiary insights are brought forward as one of the 8 sources of impact evidence.

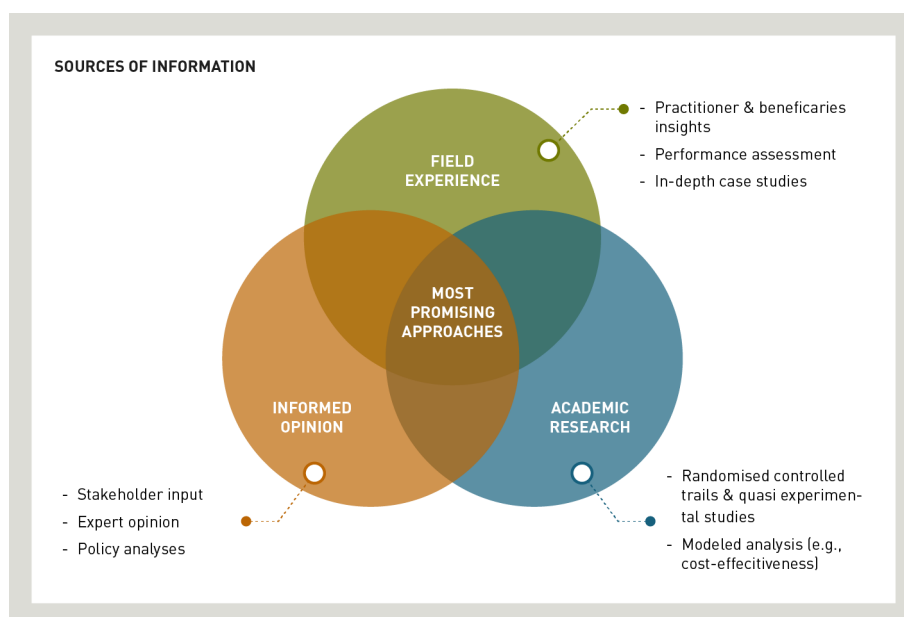


Figure 12. Philanthropic evidence chart

We can furthermore see that case studies on the field experience side, stakeholder input on the informed opinion, and trails and experimental studies on the academic research side, could serve as viable information sources. It is apparent that purely quantitative data or easily quantifiable data and information is not really obvious looking at the suggested sources. Much like the Community Innovation Surveys (CIS) and its national spin-offs (also in the OECD context) the inclusion of qualitative data is not just unavoidable but a necessity (also see the below section SROI).

Sources of information

<sup>10</sup> See: <https://iris.thegiin.org/>

Unlike the CIS, a data collection effort for SI metrics will also need to look for data from unusual respondents, shifting from, beneficiaries (case studies) to firms (CIS) and public sector (NESTA) to the Third Sector.

### 5.1.2 Social Return on Investments (SROI)

Another measurement approach that is often referred to by governments (Wood & Leighton 2010: 13-14) is the Social Return on Investments (SROI) approach, as in particular developed by the SROI Network (Nicholls et al. 2012). “SROI measures change in ways that are relevant to the people or organisations that experience or contribute to it. It tells the story of how change is being created by measuring social, environmental and economic outcomes and uses monetary values to represent them. This enables a ratio of benefits to costs to be calculated (Nicholls et al. 2012: 8).” SROI applies seven principles and is performed over six stages. The SROI principles are (Nicholls et al. 2012: 9):

- *Involve stakeholders.*
- *Understand what changes.*
- *Value the things that matter.*
- *Only include what is material.*
- *Do not over-claim.*
- *Be transparent.*
- *Verify the result.*

Social Return on Investment reporting details 6 stages, which are (Nicholls et al. 2012: 9f.):

- *Establishing scope and identifying key stakeholders. It is important to have clear boundaries about what your SROI analysis will cover, who will be involved in the process and how.*
- *Mapping outcomes. Through engaging with your stakeholders you will develop an impact map, or theory of change, which shows the relationship between inputs, outputs and outcomes.*
- *Evidencing outcomes and giving them a value. This stage involves finding data to show whether outcomes have happened and then valuing them.*
- *Establishing impact. Having collected evidence on outcomes and monetised them, those aspects of change that would have happened anyway or are a result of other factors are eliminated from consideration.*

- *Calculating the SROI. This stage involves adding up all the benefits, subtracting any negatives and comparing the result to the investment. This is also where the sensitivity of the results can be tested.*
- *Reporting, using and embedding. Easily forgotten, this vital last step involves sharing findings with stakeholders and responding to them, embedding good outcomes processes and verification of the report.*

### 5.1.3 Other Social Impact Measurement Approaches

Although the SROI approach largely corresponds to the demands of the GECES sub-group (2013) with respect to effective impact measurement. This, even though the GECES sub-group also claims that a quantification of impact (as a critical point of SROI is the strict monetisation of outcomes) misses the specific social objectives (the use value!) of many SIs and thus, cannot be applied to all organisations (Wood & Leighton 2010: 14). Other approaches therefore point out that social impact assessment should not only be limited to quantitative data but also to qualitative approaches and data (see, for instance, von Jacobi et al. 2015: 13-15). A strong argument in this regard is that many aspects of SI and their objectives cannot be adequately represented in quantitative terms. Examples for this are the degree of marginalisation or the resources (e.g. agency/power, social ties) of individuals that are targeted by SI. In addition, as von Jacobi et al. (2015: 17-19) point out, any social impact measurement must be clear with regards to the unit of analysis. A measurement may be performed on the micro-level and thus capture (marginalised) individuals, families or enterprises and other organisations, on the meso-level, capturing groups, neighbourhoods, or municipalities, provinces and regions, or on the macro-level and capture a whole country. Each level requires specific indicators.

Equally important for answering the question “what to measure” is the dimension in which the scrutinised subject shall be measured. SI aims at marginalised people but marginalisation can be conceptualised and captured in different ways. For instance, it can focus on economic marginalisation and measure poverty, or it can aim at well-being and / or social and political participation and measure the perceived well-being of individuals in different contexts or their political and social activities. Given that marginalisation is a multi-dimensional problem there are numerous ways to approach and measure it, and many measurements try to capture the multi-dimensionality of marginalisation by combining different approaches and methods. Von Jacobi et al. (2015: 19-20) suggest capturing marginalisation in six areas of life in which lack of power or empowering processes play a vital role: nature, artefacts/technology, culture, economy, military/personal security and politics.

**What to measure?**

Finally, it must be noted that because the term “SI” itself is not clearly defined and as such allows for varying concepts that in turn affect measurement approaches

and results. For instance, a concept of SI that puts an individual's or small group's response to a social need at the core (e.g. Mumford 2002) would focus on that individual or group in context with the identified social need / target group. In contrast, a concept of SI focusing on networks (e.g. Young 2011, Le Ber & Branzei 2010, Perini et al. 2010) would emphasise the network dynamics and draw no or at least a less strict line between innovators and target groups.

#### Efficient & realistic measurement

This range of issues provides a strong barrier towards an efficient and realistic measurement of use value and the impact of SI. The requirements from measurements in this regard are high. For instance, the GECES sub-group (2013: 18) demands that effective social impact measurement must be:

- relevant: related to, and arise from the outcomes it is measuring
- helpful: in meeting the needs of stakeholders', both internal and external
- simple: both in how the measurement is made, and in how it is presented
- natural: arising from the normal flow of activity to outcome
- certain: both in how it is derived, and in how it is presented
- understood and accepted: by all relevant stakeholders
- transparent and well-explained: so that the method by which the measurement is made, and how that relates to the services and outcomes concerned are clearly founded on evidence: so that it can be tested, validated, and from the grounds for continuous improvement.

While approaches like SROI seem to formally meet these requirements it is obvious that the conceptual and data problems outlined above make it difficult to produce valid results with regard to these requirements. In addition, the fact that social impact measurement usually covers a variety of stakeholders with diverging interests even complicates the measurement. For instance, the recommendations of the GECES sub-group (2013: 1) require from the measurement of social impact to balance

- the needs of social enterprises, investors, fund managers and other stakeholders
- comparability in reporting and monitoring.
- costs of measurement against its benefits.
- the diversity of need, services provided, geography and demography, between State and voluntary and community sector ("VCS") provision, and State and other funding across the Member States.
- Between a clear and certain approach, but one which can cope with change and improvement

Becker (2001: 311) defines social impact assessment as: *“the process of identifying the future consequences of a current or proposed action which are related to individuals, organizations and social macro-systems”*. Social impact assessments were typically commissioned by governments to assess the consequences of a major public project, next to assessment of the social consequences also economic impacts, environmental impacts and fiscal-impacts could be part of the assessment. By now, social impact assessments are obligatory for most governments in the EU when they innovate their laws, institutions or policies. According to the Vanclay et al. (2015:2) social impacts are changes to one or more of the following: people’s way of life; their culture; community; political systems; environment; their health and wellbeing; personal and property rights; and/or their fears and aspirations. Later, also many firms and non-profit organisations made use of social impact assessment when they formulate new policy, seek funding for new proposals, or report on past activities in annual reports. Since we probably still mostly have the large scale, resource intensive social impact assessments in mind that are commissioned by governments for large projects, most SIMPACT case studies probably didn’t spot the many, small-scale, light, tacit, ad-hoc social impact assessment activities concerning the changes in the lives of beneficiaries of the SI.

## 5.2 Usage of Formal Evaluation & Assessment Tools for Measuring Economic & Social Impact

According to the analysis of Terstriep et al. (2015) the impact of SI is hardly measured or evaluated. For instance, Terstriep et al. (2015) report concerning the case study KONNEKTid (box 3.4 -42; p.113) that it “doesn’t measure its social impact in any way although internal communication regarding performance and results are discussed, but is limited to concerned stakeholders”. This statement explains that the social innovator evaluates the performance and results in an informal, qualitative way, by exchanging tacit knowledge with stakeholders. The SI didn’t use formal, quantitative tools to measure results in terms of standardised indicators for impact. Vielfalter (Terstriep et al. 2015; box 3.4-18) has not issued any formal communication on the impact of their programme, but in internal communications it has. The main reason why the SI case studies did not record many evaluations and impact assessments could be the confusion of what it actually is, since there is no agreement on the definitions and the methods:

- do only formal evaluations and codified impacts count?
- does only output in terms of exchange value count?
- Is tacit knowledge and learning less valuable?

Impact measurement  
– an exception

There are many reasons why Social innovators may not use formal tools for evaluation and why it is more difficult, and different for SI. As has been confirmed in our cases studies Jepson (2005) and Nicholls (2008) for instance refer to the “trust or legitimacy surplus” which is granted to many non-profit organisations because of their charitable status or reputation, which means that resources are not allocated based on measured performance. Compared to impact assessment of for profit business innovations it is more difficult for SI to find out what causes what, since there are more different inputs involved, from various actors (funders, beneficiaries, donors, implementers, users, partners) with various objectives (or aimed outcomes), and therefore also likely to have a broader range of outcomes and impacts.

Do other kinds of innovators more often evaluate impact?

In the pharmaceutical sector it is obligatory to assess the impact from new medicines on health. Innovations in the automotive industry have to be assessed on their impact on pollution and safety. The kinds of impact that firms are obliged to report on differs by sector and political context. Terstriep et al. (2015) states that some for-profit companies do more on social impact assessment than SIs. In order to convince markets that they are not irresponsible they voluntarily show some indications of positive social consequences of their activities.

In some fields self-reporting is institutionalised, when industries are for instance requested to record the use of child labour for off-shored production. Most common kind of evaluations of business innovations is perhaps customer satisfaction, but this information is mostly kept private or only positive, for marketing purposes. Customer markets are however evaluated by for instance the EC. The results of the 10<sup>th</sup> EU consumer market scoreboard for instance shows that among the worst performing sectors are: banking and telecoms (see also Figure 13).

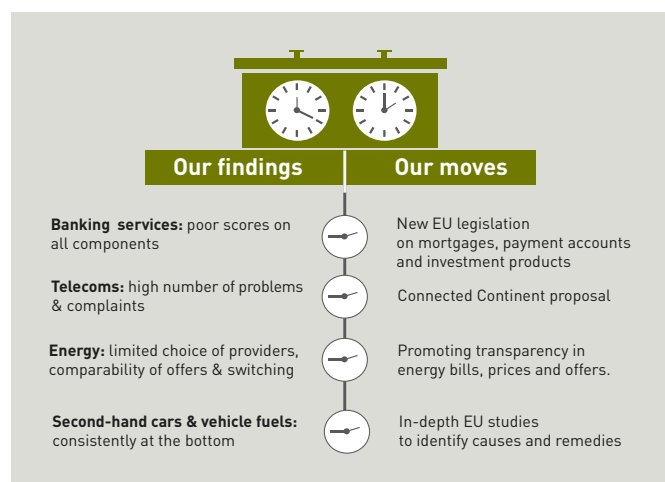


Figure 13. The EU consumer market scoreboard (EU, 2015c)

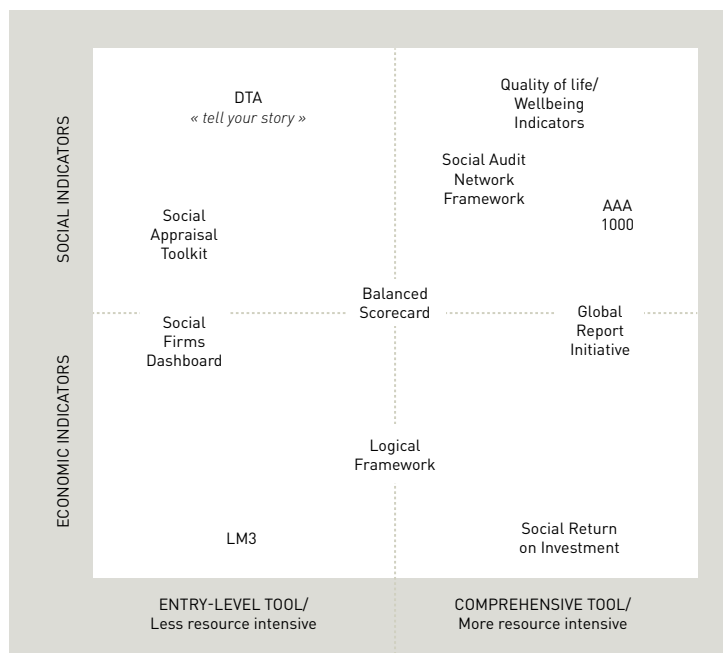
We are not aware of evaluations conducted by banks or telecom companies on the social and or economic impact from these bad performing innovative mortgages or



telecom services (although they might contribute to homelessness and youngsters with high-debts).

So, some firms, in the context of corporate responsibility may voluntarily conduct and report on social and economic impact assessment, but not all. However, for SI we could even claim that they all report on social and or economic impact in one way or another, but the form and the methods used, are very basic, light, qualitative, low-cost, less resource-intensive. E.g.: based on personal testimonials from beneficiaries on a Facebook page which emphasise the social aspects, instead of resource-intensive tools with a focus on economic indicators such as Social Return on Investment, or cost-benefit analysis (Figure 14.). The latter tools are actually based on methods to monetise (estimating the concerning exchange value) of all factors and indicators (social-indicators, environmental-indicators, health-indicators, etc.). After monetisation, there are only economic indicators, which allow for calculation of an estimated social return on investment in Euro's. For a description of the tools see section 5.3.

Figure 14. Mapping of impact tools



Source: Adapted from Wood & Leighton (2010)

Another reason why such more formal and resource intensive methods of SI impact evaluations are rare, is that it fits their mode of innovation: the scarcity of resources, their mission oriented mode of innovation, and their aversion to bureaucracy, standardisation and forms. Impact evaluations are costly, so in case the funders do not dedicate a separate budget for it, or demand it for getting subsidies or grants, social innovators may consider it a waste of resources, resources they would rather spend on supporting additional people in need. Social innovators or

Misfit between SI & evaluation methods

partners may not see the need for measuring and evaluating impact. They might object to the 'bureaucratic paperwork', and mistrust the objective. Evaluations among beneficiaries may for instance be considered by volunteers or other participants as signs of lack of trust. This was for instance the case in VoorleesExpress (Appendix textbox I) where originally they asked the children to give the volunteers a grade after each session. But the children actually did not like to do this, so they had chosen another, less judging form, at another moment in time. Formal quantitative evaluations can also form an additional push for 'hyper-exploitation' and getting stuck in a mere output oriented mode of innovation.

### 5.3 Why evaluate & assess Impact?

#### Learning from evaluation & assessment

Measurement, evaluation and impact assessment should be seen from a learning point of view. To learn from the past, and to incorporate lessons in plans for the future. To learn from your own experiences, but also of those of others. Many of the informal ways of learning and evaluating are not less useful, but there are some advantages in codified forms and more standardised modes of evaluation and impact assessment. Agreeing that learning is the overarching objective, the EU Guidance document on Monitoring and Evaluation (2014), subsequently distinguishes two purposes of evaluations or impact assessments: supporting (strategic and operational) management and assessing whether the desired effect has been produced. *Counterfactual impact evaluations* focus on this latter purpose by answering the question Does it work? Since not all changes can be attributed to the SI, impact refers to the change that can be credibly attributed to a SI (EC, 2014, p.6). The quantitative methods used are developed in statistics and medical research, e.g. 'treated' and a 'non-treated' control group are compared to make it likely that the difference can be attributed to the 'treatment' or SI in our case. *Theory-based impact evaluations* serve to support the SI management by answering the question: why and how does the SI work? The theory of change is central in this more qualitative impact assessment approach. The question why certain actions produce effects, and for whom, and under which conditions, intentionally or un-intentionally is very useful for the social innovator and for all those involved in the implementation, moreover costs in terms of resources, time and competences are less, and in time evaluation practices can evolve towards, and complemented with, more codified, formal and resource intensive forms of impact assessments, possibly involving partners in their ecosystems in the evaluation (Table 15).

#### The case of Mothers of Rotterdam

Evaluations at the level of eco-systems provide opportunities for learning among actors in related fields, but also to share costs. In the case of Mothers of Rotterdam (see Appendix Textbox I) the university had developed a large international research proposal in which the socio-medical impacts of combined medical and social care (as it is done in the SI of Mothers of Rotterdam) would be assessed at systems

level. Probably they will apply advanced quantitative statistical techniques with control groups, because in the medical field that is the norm for assessing impact. Their focus will probably be on health output indicators such as the size of the unborn child. Although the Social innovator already has seen enough evidence from his own tacit experiences, and from his informal discussions with his medical and socio-medical partners in the project, he will of course follow this academic research with interest, and the results might serve as additional pieces of evidence, which he could show to others.

However, the concerning SI was more interested in talking about how and why the SI that he developed works. He talked about his theory of change when explaining how they managed to change the lives and behaviour of the pregnant woman in problematic neighbourhoods. He explained that they first tackle the main stress-causing problem. Often the mayor problem is having a high financial debt. He had also read about the theory of scarcity (Mullainathan & Shafir 2013), which confirmed his experience, that people in financial problems cannot think properly anymore, their IQ drops, they behave irrational, and get themselves in all kinds of other problems as a result of having such high debts. We won't repeat his whole theory-based impact evaluation, but when we asked if an evaluation or impact assessment had been conducted he said "no, not yet", and he only referred to the above mentioned research proposal of his university partner.

	Evaluation at Actor Level	Evaluation at Ecosystem Level
<b>Tacit knowledge/ informal learning</b>	<ul style="list-style-type: none"> <li>• Self-evaluation in discussions with beneficiaries, partners, donors, clients</li> </ul>	<ul style="list-style-type: none"> <li>• Organise shared events, networking</li> <li>• Human mobility schemes</li> </ul>
<b>Codified knowledge/ formal learning</b>	<ul style="list-style-type: none"> <li>• Standard reporting forms</li> <li>• Satisfaction ratings</li> <li>• Surveys (see Appendix Textbox 1 – VoorleesExpress))</li> </ul>	<ul style="list-style-type: none"> <li>• Evaluation platforms</li> <li>• Evaluation by university (see Appendix Textbox 1 – Mothers of Rotterdam)</li> </ul>

Table 15. Formal and informal learning from evaluation

## 5.4 Light, informal & theory-based Impact Evaluations

### DTA Tell Your Story

Referring to the instruments mentioned in Figure 14., light forms of evaluation are represented in the left half of the chart. For instance, “DTA Tell Your Story” is a guideline for development trusts, issued by the Development Trust Association (UK)<sup>11</sup>. Development trusts focus on positive social, environmental and economic change. The “Community Impact Mapping” used in this guideline shall help development trusts to start thinking about why and how their organisation does what it does and to visualise their “journey” and the difference they make to their community.

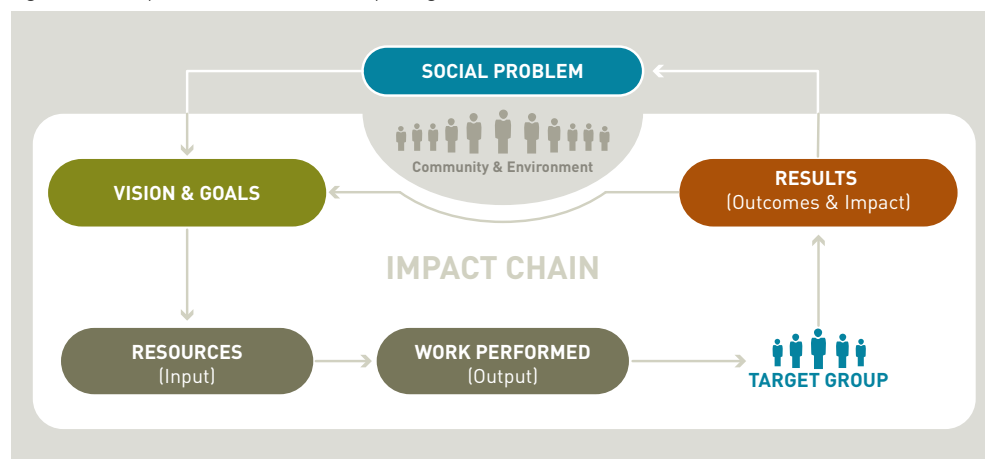
### Social Appraisal Toolkit

The Social Appraisal Toolkit is similar but in contrast to “DTA Tell Your Story” it is an online tool released by the “Valuing the Difference” team in the North East of UK with funding from the Esmée Fairbairn Foundation<sup>12</sup>. The user carries out an online self-assessment of governance, social impacts, and financial viability. The tool also helps the user to identify how key social impact data will be captured and reported

### Social Reporting Standard

While these two tools have to be purchased, the Social Reporting Standard (SRS) can be understood as a standardised approach of the same kind as the two previous tools, is a freely available guideline provided by the German Social Reporting Initiative.<sup>13</sup>

Figure 15. Impact Chain of the Social Reporting Standard



Source: Adopted from SRS (2014)

It aims at an outcome-oriented learning culture both within the organisation as well as with partners and sponsors. It is suitable for both the organisation’s internal

<sup>11</sup> See <http://www.dtawales.org.uk/publications/c/152/i/292/>

<sup>12</sup> See <http://www.anybodycan.org.uk/sat.html>. The link to the tool did not work at the time this report was produced.

<sup>13</sup> See <http://www.social-reporting-standard.de/>

reports as well as for the transparent representation of the organisation's results to the public. The authors highlight that SRS is particularly useful for the preparation of regular annual reports. This reporting standard implements the recommendations of the GECES Sub-group (2013) insofar as it requires from SI to keep to a strict structure. It starts with an overview (formal information on the organisation, its vision and approach and the scope of the report), proceeds with a detailed description of the social problem targeted by the SI and the solution the organisation has found, including impact (See Figure 15. It ends with the organisational profile of the SI, which includes governance, finances and accounting practices.

The Social Firms Dashboard is now called the Third Sector Performance Dashboard, which emanated from the Social Firm Performance Dashboard that was originally designed for Social Firms and emerging Social Firms to use as an internal performance management tool for their own business improvement. The dashboard is distributed on CD-ROM by Social Firms UK.<sup>14</sup> The tool helps any organisation within the third sector to monitor their progress against objectives and report as appropriate internally and externally on actual performance. The tool is based upon Balance Scorecard principles but acknowledges that organisations in the third sector are typically short of time and resources, therefore it uses templates and samples. Overall, organisations can log and monitor progress in six different standard elements of their activities, which can be tailored to the needs of the organisation:

- Financial
- Governance
- Customers or external stakeholders
- Performance or environmental
- People and work life balance
- Marketing and communications

LM3 stands for Local Multiplier 3 and was developed by the new economics foundation (nef) as a simple and understandable way of measuring local economic impact.<sup>15</sup> It aims at following the "money trail" that, for instance, is generated through an SI's spending in the local economy, with the goal of improving the organisation's local economic impact.

Former Social Firm  
Dashboard

LM3

---

<sup>14</sup> See <http://www.proveandimprove.org/tools/socialfirm.php#SectionFootnotes> and <http://www.socialimpactscotland.org.uk/understanding-social-impact/methods-and-tools/third-sector-performance-dashboard/>. The link to Social Firms UK did not work at the time this report was produced.

<sup>15</sup> See <http://www.proveandimprove.org/tools/localmultiplier3.php>

“The measuring process starts with 1) a source of income (say total income into a social enterprise) and follows how it is 2) spent and then 3) re-spent within a defined geographic area (that is called the ‘local economy’) (Prove and Improve 2016).”<sup>16</sup> Another goal of LM3 is to influence the public sector to consider the impact of its procurement decisions. In order to meet the needs and capacities of the users it was designed to be quick and relatively easy. Meanwhile there are also commercial versions available from suppliers that subsidise the not-for-profit sector,<sup>17</sup> though nef still holds the copyright of the original manual and distributes it for free. Though it is claimed that the tool is simple and understandable the five general stages to an LM3 analysis, especially stages 4 and 5, appear quite challenging for many SIs:

1. “Determine what your ‘local’ area is.
2. Identify what your starting point, or your income source is (Round 1).
3. If Round 1 is the organisation’s income, then for Round 2 you need to break down how you spend your income within the local area.
4. For Round 3, you need to survey the businesses and people you spend your money on to find out how they spend their incomes.
5. Collate all responses, do some quick maths, and then you have your LM3 score.”<sup>18</sup>

A limitation of LM3 is that it measures only economic impact but no social or environmental impact. Because only economic indicators are used, this tool is positioned at the bottom line in Figure 14..

The advantage of such a light forms of social reporting and impact measurement is that it is very much in line with any organisations interest in (and sometimes obligation to) self-presentation and self-assessment. The results of the SIMPACT case studies show that many SIs do not have the resources or the capacities to perform impact assessment but when such attempts are made they come close to this kind of social reporting. For instance, the case study of Education for Accommodation followed the Social Reporting Standard approach (Terstriep et al. 2015; box 3.4 - 44).

However, the fact that a number of links to organisations that distribute these tools or to these tools themselves do not exist anymore seems to suggest that the lifetime of such tools is often limited. This may be due to the limited demand and usage of such tools by SIs, the dynamics within the SI supporting sector and the fact that

---

<sup>16</sup> See <http://www.proveandimprove.org/tools/localmultiplier3.php>

<sup>17</sup> See <https://www.lm3online.com/>

<sup>18</sup> Quoted from <http://www.proveandimprove.org/tools/localmultiplier3.php>

some tools have meanwhile advanced into other tools with different names. A reason - besides the lack of time and personnel - for many SIs not to use reporting and impact assessment tools - may be that quite a number of these tools and underlying software are proprietary, which implies additional costs for SIs.

There are many others that only followed bits and pieces of such methods in a non-standardised way, but this does not make them less accurate or less valuable. Some follow the examples of others by entering more information into their annual reports, which also includes information and indicators concerning 'learning-cycle elements' such as problem, goal, inputs, activities, results, impacts. In several cases the social innovators didn't refer to their own scientific impact assessments, but to impact assessments from scientists in their field of SI. In this respect social science and humanities are way more important sources for innovation than the technology research from science and engineering disciplines. Social science research provides a kind of circumstantial evidence, which is valid to back your value proposition as a social innovator. However, the so-called 'theories of change', and logic frameworks, do not necessarily have to be used in a heavy, and academic mode. Social innovators rather opt for the short catchy colourful statements on such logics, narratives, and wisdom, on how things work, why and for whom, and in which circumstances.

Given the fact that even such "lightweight" tools are often too challenging for many SIs, due to their limited resources and capacities, it is evident that the more comprehensive and resource-intensive tools illustrated in the middle and in the right half of Figure 14. are even less attractive for SIs:

- **Balanced Scorecards (BSC)** are widely used in commercial businesses, but seem to be attractive primarily for large corporations. Moreover, there are so many approaches towards Balanced Scorecards and many of them have advanced from a relatively simple performance measurement tool into a full strategic planning and management system that only very few - rather large and highly organised - SIs would be able to use efficiently.<sup>19</sup>
- **Logical Framework Analysis (LFA)** is a project management tool that has originally been developed specifically for development aid projects, but is meanwhile applied in other areas as well. Its core is a matrix of four columns and four (or more) rows (the so-called Logframe Matrix, see an example in Figure 16) that describe "the project's hierarchy of objectives (Project Description or Intervention Logic), the key external factors critical to the project's success (Assumptions), and how the project's achievements will be monitored and evaluated (Indicators and Sources of Verification) (European Commission 2004: 57)." Even though the matrix does not look

Available tools challenge social innovators

---

<sup>19</sup> See <http://balancedscorecard.org/Resources/About-the-Balanced-Scorecard>

very complicated the correct and efficient use of LFA is aligned with considerable requirements, pitfalls and difficulties, as illustrated in Figure 17.

Figure 16. Typical Structure of a Logframe Matrix

PROJECT DESCRIPTION	INDICATORS	SOURCE OF VERIFICATION	ASSUMPTIONS
<b>Overall Objective</b> - The project's contribution to policy or programme objectives (impact)	How the OO is to be measured including Quantity, Quality, Time?	How will the information be collected?	
<b>Purpose</b> - Direct benefits to the target group(s)	How the Purpose is to be measured including Quantity, Quality, Time?	As above	If the Purpose is achieved, what assumptions must hold true to achieve the OO?
<b>Results</b> - Tangible products or services delivered by the project	How the Results are to be measured including Quantity, Quality, Time?	As above	If the Results are achieved, what assumptions must hold true to achieve the Purpose?
<b>Activities</b> - Tasks that have to be undertaken to deliver the desired results			If Activities are completed, what assumptions must hold true to deliver the Results?

Source: European Commission (2004: 58)

Figure 17. Strengths and Common Problems with the Application of the LFA

ELEMENT	STRENGTHS	COMMON PROBLEMS/DIFFICULTIES
<b>Problem analysis and object setting</b>	<ul style="list-style-type: none"> <li>» Requires systematic analysis of problem, including cause and effect relationships</li> <li>» Provides logical link between means and ends</li> <li>» Places the project within a broader development context (overall objective and purpose)</li> <li>» Encourages examination of risks and management accountability for results</li> </ul>	<ul style="list-style-type: none"> <li>» Getting consensus on priority problems</li> <li>» Getting consensus on project objectives</li> <li>» Reducing objectives to a simplistic linear chain</li> <li>» Inappropriate level of detail (too much/too little)</li> </ul>
<b>Indicator and source of verification</b>	<ul style="list-style-type: none"> <li>» Requires analysis of how to measure the achievement of objectives, in terms of both quantity and quality</li> <li>» Helps improve clarity and specificity of objectives</li> <li>» Helps establish the monitoring and evaluation framework</li> </ul>	<ul style="list-style-type: none"> <li>» Finding measurable and practical indicators for higher level objectives and for projects with 'capacity building' and 'process' objectives</li> <li>» Establishing unrealistic targets too early in the planning process</li> <li>» Relying on 'project reports' as the 'main source of verification', and not detailing where the required information actually comes from, who should collect it and how frequently</li> </ul>
<b>Format and application</b>	<ul style="list-style-type: none"> <li>» Links problem analysis to objective setting</li> <li>» Emphasises importance of stakeholder analysis to determine 'whose problems' and 'who benefits'</li> <li>» Visually accessible and relatively easy to understand</li> </ul>	<ul style="list-style-type: none"> <li>» Prepared mechanistically as a bureaucratic 'box-filling' requirement, not linked to problem analysis, objective setting or strategy selection</li> <li>» Used as a means of top-down control - too rigidly applied</li> <li>» Can alienate staff not familiar with the key concepts</li> <li>» Become a 'fetish' rather than a help</li> </ul>

Source: European Commission (2004: 59)

- **Quality of life- and wellbeing-indicators** may appear easy to use but it to identify the most suitable tool out of the numerous indexes that exist, to



carry out the survey and to analyse the results requires specific skills and may consume a lot of time.<sup>20</sup>

- The **Social Audit Network Framework** (or Social Accounting and Audit – SAA) has been developed by the New Economics Forum (nef) and is now maintained by Social Audit Network (SAN)<sup>21</sup> and AccountAbility<sup>22</sup>. SAA is a framework for investigating an organisation’s performance against social, environmental and economic objectives and its values. It serves to monitor, evaluate and account to internal and external stakeholders. SAA is closely related to corporate social responsibility (CSR) as performed in the private sector. After an organisation has learnt how SAA works and what resources it requires and decided how the process will be managed the social accounting will be performed in three subsequent phases. In the planning phase the organisation has to clarify its mission, objectives, activities and underpinning values. In the accounting phase the organisation determines the scope of the social accounts and sets up ways of collecting relevant (quantitative and qualitative) information over a specified reporting period, which then will be analysed. In the reporting and auditing phase the results of the analysis are documented and provided to a list of external experts (the Social Audit Panel) for review. After the reviewers have accepted this draft the final report can be produced and published. Difficulties aligned with SAA are that it can be very time consuming and that lenders and funders do not explicitly recognise this method.<sup>23</sup>
- The **AA 1000 Assurance Standard** (AA 1000 AS) is closely related to the social accounting and auditing movement from which it originated. AA 1000 AS is a standard for assessing and strengthening the credibility and quality of an organisation’s social, economic and environmental reporting and primarily intended for use by external auditing bodies that assure an organisation’s reports or social accounts (Assurance Providers). It is freely available and maintained by AccountAbility<sup>24</sup>. Stakeholder engagement is the key characteristic of AA 1000 AS, as it emphasises the right of stakeholders’ interests to be heard, and that organisations account for themselves in relation to these interests. To this end AA 1000 AS builds upon three principles:

---

<sup>20</sup> See the – non-exhaustive – overviews provided by Alkire & Sawar (2009) , Michaelson et al. (2012), OECD (2013),

<sup>21</sup> <http://www.socialauditnetwork.org.uk/>

<sup>22</sup> <http://www.accountability.org/>

<sup>23</sup> See <http://www.proveandimprove.org/tools/socialaccounting.php>

<sup>24</sup> <http://www.accountability.org/>

- *Materiality Principle:* The organisation must include in its report information about its social, environmental and economic performance required by its stakeholders for them to be able to make informed judgments, decisions and actions.
- *Completeness Principle:* The organisation must be able to identify and understand the material aspects of its sustainability performance
- *Responsiveness Principle:* The organisation must provide evidence that it has coherently responded to stakeholder concerns, policies and relevant standards – this includes public response but also management of identified material issues i.e., improving performance.<sup>25</sup>

---

<sup>25</sup> See <http://www.proveandimprove.org/tools/aa1000AS.php>

## 6 MEASUREMENT GAP ANALYSIS: WHAT IS LACKING?

This section summarise gaps in measurement of SI, of which several already emerged from the previous sections and relate to the still not yet standardised definitions concerning SI. Compared to other forms of innovation, a common agreed consensus on definitions as in the Oslo manual does not exist yet for SI, and standards in practices among statisticians concerning measurement are lacking, such as the international practice of the Community Innovation Survey for other forms of innovation. In addition, there are gaps in the measurement of the impact of SI. There are dozens of tools to measure impact, which all claim to be the best. But the appropriateness of tools depends on measuring for whom, for what purposes, and under what conditions.

### 6.1 Gaps in Measurement of SI

Besides the fact that survey-data from social innovators or social entrepreneurs are lacking, also the measurement of SI in the public sector and in the business sector are lacking. The traditional innovation sectors are starting to think on how to collect data on being socially responsible. In the private sector the theme is Corporate Social Responsibility. The traditional STI or EU research sector refers to Responsible Research and Innovation, and have proposed indicators for this (EU, 2015b). But none of these 'social responsible' initiatives to improve indicators, is based on information from social innovators, their users, partners, or beneficiaries.

**Lack of data & measurement**

Most studies on SI rely on case-studies concerning the micro-level, and concerning the macro-level the data is often collected for another purpose. It concerns data that can be used as an indicator for certain inputs, conditions or output, but the actual SIs, the actual activities, the actual innovators and actual users and beneficiaries remain un-known, and are not measured by statistics. But also data on for instance the size of the third sector and voluntary work is not comparable among Member States, and lacking for some.

**Case studies as means of measurement**

The TEPSIE study has a focus on the macro level of measuring of SI. Due to lack of data availability, this analysis (Hubrich et al. 2012: 9-10) shows large data gaps in the countries considered, but it makes an interesting proposal for an indicator set which could measure and monitor what is going on concerning SI at national level. Their focus is on the supply-side of SI, and for many indicators the technological

component (STI) is fully included. A gap in this respect concerns the role of (indicators for) the specific demand for SI. Entrepreneurship is a central concept in the TEPSIE framework. One of the 'gaps' or difficulties they encountered concerns the comparability of the data between countries, e.g. it is limited by conceptual and statistical differences in capturing the "social economy" or third sectors in each country. Even within the same country the underlying concept to capture the social economy may lead to very different results with regard to its economic impact. This is exemplified by the case of the UK (Hubrich et al. 2012: 11), where the share of expenditures in GDP is 2.5% when the voluntary sector is considered but increases to 11.7% when the civil society is considered. Neither of the two concepts adequately represents the social economy, as meant in the context of SI, as the voluntary sector is defined too narrowly while the civil society is a too broad concept.

#### Context-specificity

Besides these conceptual difficulties the national context, in particular the concept of the welfare state that determines how social goods are provided (by public authorities or by the social economy), causes additional problems in accounting of the economic effects of SI. But, also the regulations and tax laws concerning foundations, charities, for-profit organisations and non-profit organisations differ, and are changing fast and this makes it hard to make international comparisons.

#### Data heterogeneity

Practical problems of data available from statistical offices, diverse authorities that are responsible for the administration of specific legal forms, private institutions that host unofficial data, and scientific publications hamper to get a clear overview of the impact of SI on the economy. These problems comprise diversity of data formats and units, dispersion, accessibility and quality.

Improvement of the measurement is a gradual process, a learning process. It is important that the lessons are learned, and are institutionalised in national and international surveys and statistical practices.

## 6.2 Gaps in the Measurement of the SIs Impact

There are also gaps concerning the measurement of the impact. The GECES subgroup (2013) concluded from its evaluation of social impact measurement approaches that no single set of indicators can be devised top-down to measure social impact in all cases. The reasons for this difficulty are manifold:

1. The *variety of the social impact* sought by social enterprises is very great and no single methodology can capture all kinds of impacts fairly or objectively;
2. While there are some quantitative indicators that are commonly used, these often fail to capture some essential *qualitative aspects*, or, in their emphasis on the quantitative, can misrepresent, or undervalue the qualitative that underpins it;

3. Because, owing to the work and data-intensive nature of measuring impact, obtaining a precise evaluation is often at odds with the key need for proportionality. The amount of *time* spent and the *degree of accuracy* sought and achieved in any measurement exercise must be proportionate to the size of the enterprise and the risk and scope for the intervention being delivered;
4. Because in an area characterised by wide variety in the nature and aims of activities, and the types of SE (social enterprise) delivering them, there is a *clear trade-off between achieving comparability* between activities through using common indicators and utilising indicators that are useful and relevant for the management of the social enterprise; increasing (artificial) comparability can lead to a loss of relevance
5. Because impact measurement and the world of social enterprise and SI has been evolving very rapidly, it is difficult to stick to any one *standard* over a number of years.

Another gap that should be addressed is the methodology with which to approach SI impact measurement. The accounting and returns on investment approaches clearly lean too much towards a purely quantitative approach, and are very costly. Putting aside the positivist-constructivist debate, the use of mixed methods (Tashakkori & Teddlie, 2003) in the collection of meaningful data to measure SI is the most likely and productive way forward. The mixed methods approach entails a convergence of both the quantitative and qualitatively focused methods (and paradigms; see Creswell & Plano Clark, 2007). An example, from surveying, would be a follow-up qualitative question to explain, and contextualise, the results of the quantitative part of the same question. This would enable the surveyors to address the more qualitative "use value" part of SI. Case study and interview design inspired methods would as such find a place in a larger survey campaign exploring the SI space.

Mixed methods  
approach

# 7 INDICATOR-BASED PROFILING OF SI AT MICRO LEVEL OF SIMPACT CASE STUDIES

## 7.1 Survey of SIMPACT Case Studies

In work package 3 of SIMPACT two kinds of qualitative case studies have been produced: SI Biographies and Business Cases. In the Appendix, the Guiding questions for the SIB's are included. These open questions served as a checklist for the interviews and the text of the case studies has the same structure. The Business Cases have a slightly different structure, but largely the same topics have been addressed in both types of case studies. The survey with closed questions (Table 16.) started with a few questions which were the same as in the SIBs, and to a large extent followed the structure and concepts used in the guidelines for the SIBs (e.g. concerning the thematic field, geographical scale, development stage, etc.). All SIBs and BCs are included and two additional cases which have been performed under WP1, resulting in the SIMPACT database of 55 cases of SI. Item non-response has been addressed by entering the mean value for the concerning item.

The survey has been conducted on-line in the beginning of 2016 and the questions have been answered as much as possible by the authors of the case studies, but otherwise by other SIMPACT partners who filled in the survey after having read the concerning in-depth case study report. The first part of the survey consists of questions which could be answered with yes or no, but the largest part of the questions ask for a rating on a Likert-type scale, ranging from very high to very low.

Besides questions on the type of SI, the actors involved, and type of funders, there are several main groups of questions on: objectives, input of resources, obstacles, and output/outcomes. The first eight output questions ask to rate the likely achieved improvements for the marginalised target group. The next eight output questions ask for a rating of the improvements for the social innovator. After four other output questions and a rating of the long-term perspective, the last part of the survey consists of questions related to the main conclusions from the work package 3 analysis as reported in D3.2 (Terstriep et al. 2015). The respondents were asked: "How do you rate the extent to which the following WP3 empirical findings apply to this case". This part of the survey has not been analysed for this deliverable, but will serve to complement the analysis of wp3 and other work packages.

Table 16. Survey questions and code used in database and graphs

Question	Code
Please fill in the name of SI (Biography or business case)	case_name
Thematic field (Problem addressed) [Employment]	Employment
Thematic field (Problem addressed) [Migration]	Migration
Thematic field (Problem addressed) [Demographics]	Demographics
Thematic field (Problem addressed) [Gender]	Gender
Thematic field (Problem addressed) [Education]	Education
Thematic field (Problem addressed) [Poverty]	Poverty
Country	Country
NUTS code (or name of region of origin/location of social innovator)	nuts
Please indicate below the geographical scale of the SI. [Local]	scale_local
Please indicate below the geographical scale of the SI. [Regional]	scale_reg
Please indicate below the geographical scale of the SI. [National]	scale_nat
Please indicate below the geographical scale of the SI. [Europe]	scale_eu
Please indicate below the geographical scale of the SI. [World]	scale_world
Development stage [Ideation]	stage_idea
Development stage [Prototyping]	stage_proto
Development stage [Implemented]	stage_impl
Development stage [Scaled]	stage_scaled
Development stage [Discarded]	stage_disc
Prospects for expansion [Prospects for expansion]	prospect
What type of organisation is the social innovator- [Type of organisation]	Type of organisation
What type of SI is it- [New Product/service]	typeSI_prod
What type of SI is it- [New market/ or target group]	typeSI_newmarket
What type of SI is it- [New target group]	typeSI_new group
What type of SI is it- [Organisational innovation]	typeSI_orga
What type of SI is it- [New method, process-innovation]	typeSI_proces
What type of SI is it- [New inputs (expertise, ICT, design-skills, material, etc.)]	typeSI_input
What type of SI is it- [Other]	typeSI_other
Knowledge base [How would you rate the social innovator's internal knowledge base on the theme and target group-]	KB_int
Knowledge base [How would you rate the SI's use of external knowledge on the theme and target group-]	KB_ext
Knowledge base [How would you rate the business knowledge, and management capabilities of the social innovator-]	KB_bus

Question	Code
Actors and collaborations [Approximately how many actors are involved in the inner core of the SI-]	innercore
Actors and collaborations [Approximately how many organisations collaborate as partners, promoters, and supporters of the SI-]	supporters
Actors and collaborations [How would you rate the diversity of the actors involved-]	act_diversity
Funding and finance [Please rate the extent to which the SI generates revenues/sales-]	generate_rev
Type of funder The main funder is the organisation that funds the highest share of the budget of the SI. [What kind of organisation is the main funder of the SI-]	type_fund
Type of funder The main funder is the organisation that funds the highest share of the budget of the SI. [Second main funder]	type_fund2
Type of funder The main funder is the organisation that funds the highest share of the budget of the SI. [Third main funder]	type_fund3
Please rate the importance of the following objectives for the SI. [Correcting a market failure in serving unmet needs of the target group.]	obj_mark_fail
Please rate the importance of the following objectives for the SI. [Complementing public policy in serving unmet needs]	obj_compl
Please rate the importance of the following objectives for the SI. [Business opportunities (increase revenues/profit)]	obl_bus
Please rate the importance of the following objectives for the SI. [Increase the economic value of capabilities of the target group (e.g. Employability, work-skills).]	obj_ec_cap_target
Please rate the importance of the following objectives for the SI. [Increase the personal & social value/capabilities of the target group (e.g. Empowerment, health, life-skills, self-confidence)]	obj_soc_cap_target
Please rate the importance of the following objectives for the SI. [Increase the public value/capabilities of the targetgroup (social cohesion, inclusion, lobbying, legitimatation)]	obj_pub_cap_target
Please rate the importance of the following resources (and activities) as inputs of the SI. [Knowledge (e.g. from experts, knowledge institutes, students)]	imp_res_experts
Please rate the importance of the following resources (and activities) as inputs of the SI. [Labour]	imp_res_labour
Please rate the importance of the following resources (and activities) as inputs of the SI. [Capital/funding]	imp_res_cap
Please rate the importance of the following resources (and activities) as inputs of the SI. [ICT]	imp_res_ict
Please rate the importance of the following resources (and activities) as inputs of the SI. [Social capital (engagement, volunteering)]	imp_res_soc_cap
Please rate the importance of the following resources (and activities) as inputs of the SI. [Relational capital, resources, networking]	imp_res_rel_cap
Please rate the importance of the following resources (and activities) as inputs of the SI. [Training, education]	imp_res_train
Please rate the importance of the following resources (and activities) as inputs of the SI. [Political support]	imp_res_politic



Question	Code
Please rate the importance of the following obstacles for the SI- [Financial]	imp_obs_fin
Please rate the importance of the following obstacles for the SI- [Organisational/logistical]	imp_obs_org
Please rate the importance of the following obstacles for the SI- [Legal]	imp_obs_legal
Please rate the importance of the following obstacles for the SI- [Political]	imp_obs_political
Please rate the importance of the following obstacles for the SI- [Societal/cultural]	imp_obs_soc
Please rate the importance of the following obstacles for the SI- [Market share (competition)]	imp_obs_mark_share
Please rate the importance of the following obstacles for the SI- [Technological]	imp_obs_tech
Please rate the importance of the following obstacles for the SI- [Other]	imp_obs_other
Please rate the likely achieved outcomes / outputs of the SI. [Increased life skills of the marginalised]	outc_lifeskills
Please rate the likely achieved outcomes / outputs of the SI. [Increased working skills of the marginalised]	outc_workskills
Please rate the likely achieved outcomes / outputs of the SI. [Increased physical capabilities of the marginalised]	outc_phys_cap
Please rate the likely achieved outcomes / outputs of the SI. [Increased other capabilities of the marginalised]	outc_cap_other
Please rate the likely achieved outcomes / outputs of the SI. [Improved networks of the marginalised]	outc_network
Please rate the likely achieved outcomes / outputs of the SI. [Improved self-confidence of the marginalised]	outc_self_conf
Please rate the likely achieved outcomes / outputs of the SI. [Employment of the marginalised]	outc_employment
Please rate the likely achieved outcomes / outputs of the SI. [Improved income/less costs for the marginalised]	outc_impr_income
Please rate the likely achieved outcomes / outputs of the SI. [Increased management/business capabilities of the social innovator]	outc_SI_bus_cap
Please rate the likely achieved outcomes / outputs of the SI. [Increased marketing capabilities of the social innovator]	outc_SI_mark_cap
Please rate the likely achieved outcomes / outputs of the SI. [Other increased capabilities of the social innovator]	outc_SI_cap_other
Please rate the likely achieved outcomes / outputs of the SI. [Improved networks of the social innovator]	outc_SI_netw
Please rate the likely achieved outcomes / outputs of the SI. [Improved self-confidence of the social innovator]	outc_SI_selfconf
Please rate the likely achieved outcomes / outputs of the SI. [Employment growth at the social innovator]	outc_SI_empl
Please rate the likely achieved outcomes / outputs of the SI. [Improved revenues/less costs for the social innovator]	outc_SI_rev
Please rate the likely achieved outcomes / outputs of the SI. [A viable business and achieving financial sustainability]	outc_SI_stability

Question	Code
Please rate the likely achieved outcomes / outputs of the SI. [Reduced public budget costs]	outc_SI_pub_budg
Please rate the likely achieved outcomes / outputs of the SI. [Other complements to public policy]	outc_public_other
Please rate the likely achieved outcomes / outputs of the SI. [Other benefits for private partners]	outcome_private other
Please rate the likely achieved outcomes / outputs of the SI. [Other civic outcomes/benefits]	outc_civic_other
How would you rate the long-term outlook of the SI on a scale of 1 to 10-	LT_outlook
How do you rate the extent to which the following WP3 empirical findings apply to this case- [Public sector can function as innovator and driver of SI]	WP3_pubsect
How do you rate the extent to which the following WP3 empirical findings apply to this case- [social innovators find themselves in the constraint situation of neither qualifying as commercial enterprise nor as social enterprise]	WP3_constraint
How do you rate the extent to which the following WP3 empirical findings apply to this case- [social innovators behave ADAPTIVE rather than RATIONAL]	WP3_adapt
How do you rate the extent to which the following WP3 empirical findings apply to this case- [Various types of interactions with distinct actors are common practice]	WP3_interact
How do you rate the extent to which the following WP3 empirical findings apply to this case- [Interactions with private actors are mostly utilised to close existing knowledge gaps]	WP3_gaps
How do you rate the extent to which the following WP3 empirical findings apply to this case- [Public authorities often only engage if they have a direct bearing on the issue addressed by the solution, in particular, in the early stage]	WP3_publ_eng
How do you rate the extent to which the following WP3 empirical findings apply to this case- [Combining economic & social resources is a must for SI]	WP3_ec_soc
How do you rate the extent to which the following WP3 empirical findings apply to this case- [In the initial stage of the SI process innovators often lack financial resources, making it difficult to secure their own income, pay staff wages, etc.]	WP3_secure
How do you rate the extent to which the following WP3 empirical findings apply to this case- [(Public) funding necessitates recognition]	WP3_recogn
How do you rate the extent to which the following WP3 empirical findings apply to this case- [Relational capital contributes to reducing uncertainty in a constantly changing environment]	WP3_rel_cap
How do you rate the extent to which the following WP3 empirical findings apply to this case- [Broad knowledge in distinct domains appears as a key success factor in SI]	WP3_know
How do you rate the extent to which the following WP3 empirical findings apply to this case- [Social innovators know the social problem very well, the way it is solved may bring them in completely unknown fields of activity and business.]	WP3_fields
How do you rate the extent to which the following WP3 empirical findings apply to this case- [Lack of business, industry and managerial knowledge leads to failure]	WP3_lack_skills
How do you rate the extent to which the following WP3 empirical findings apply to this case- [Formulating a value proposition in which social and economic objectives are balanced is of paramount importance to ensure sustainability of SI]	WP3_valueprop

Question	Code
How do you rate the extent to which the following WP3 empirical findings apply to this case- [Scaling out (diffusion) is foremost based on the spread of the idea or framework solution, by imitation, adaption and learning]	WP3_diffusion
How do you rate the extent to which the following WP3 empirical findings apply to this case- [Scaling up is more likely to be found in for-profit organisations]	WP3_scaling_up
How do you rate the extent to which the following WP3 empirical findings apply to this case- [Actors constellation and form of organisation are subject to change throughout the innovation process and beyond]	WP3_actors

## 7.2 Explorative Methodology: Categorisation by Principal Component Analysis

Table 17. Overview of studies identifying firm level innovation modes

Innovation	Methodology	Measures feeding into modes	Data	Study
Mode 1: 'Science based high-tech firms' Mode 2: 'IT-oriented network-integrated developers' Mode 3: 'Market-oriented incremental innovators' Mode 4: 'Cost-oriented process innovators' Mode 5: 'Low-profile innovators'	Exploratory	Inputs, outputs, linkages	Swiss Innovation survey 1999 Private Services Sector	Hollenstein (2003)
Mode 1: 'Strategic Innovators' Mode 2: 'Intermittent Innovators' Mode 3: 'Technology modifiers' Mode 4: 'Technology adopters'	Prescriptive	Technological inputs and outputs	Eurostat NewCronos (largely Eurostat CIS3 data)	Arundel & Hollanders (2005)
Mode 1: 'Science, Technology and Innovation' (STI) Mode 2: 'Doing, Using, Interacting' (DUI)	Prescriptive	Inputs, organisational	2001 Danish DISKO Survey	Jensen et al. (2007)
Mode 1: 'Science-based' Mode 2: 'Specialised suppliers' Mode 3: 'Supplier-dominated' Mode 4: 'Research-intensive'	Exploratory	Inputs and outputs, linkages, organisational	Survey of SMEs in the Netherlands 2003	De Jong & Marsili (2006)
Mode 1: 'Science-based' Mode 2: 'Supplier-dominated' Mode 3: 'Production intensive' Mode 4: 'Market driven'	Exploratory	Mainly inputs, linkages	CIS2 for Denmark and Finland	Leponen and Drejer (2007)
Mode 1: 'Research' Mode 2: 'User' Mode 3: 'External' Mode 4: 'Production'	Exploratory	All CIS variables available	Eurostat CIS3	Srholec & Verspagen (2008)
Mode 1: 'New-to-market innovating' Mode 2: 'Marketing-based imitating' Mode 3: 'Process modernising'	Exploratory	Inputs and outputs	Innovation survey of 9 OECD countries	Frenz & Lambert (2009)

The use of explorative methodology to identify firm level modes of business innovation

Innovation	Methodology	Measures feeding into modes	Data	Study
Mode 4: 'Wider innovating'				
Mode 1: 'Organisational innovations'	Exploratory	Mainly outputs	UK CIS4	Battisti & Stoneman (2010)
Mode 2: 'Technological innovations'				

Source: Frenz & Lambert (2012)

### Patterns of innovation

Many authors have shown patterns in the way firms innovate by a combination of resources, activities and capabilities. Some of them use survey data to identify different modes (types, models, strategies) of innovation, mostly based on CIS data which relates to a variety of answers from firms to questions concerning innovations. Pavitt (1984) was one of the first to show with his taxonomy of innovating firms that the sources and purposes of innovation are diverse and that one can identify different modes of innovation. He mainly related the types and modes of innovation to sectors, showing that they are industry-specific in the sense that some modes are more frequent in certain industries. The taxonomy of Pavitt is still visible in the results of others who studied this (Table 17).

### Prescriptive and exploratory typology methods

Table 17 gives an overview provided by Frenz and Lambert (2012) of some studies which have followed-up the search for patterns in firm-level data, hence identifying main types or modes of innovation. They refer to these modes as 'mixed modes', as they indeed refer to certain combinations of innovation resources, activities and outputs which often can be found in (the CIS answers for) one firm. There are two methods to come to such a typology: either prescriptive or exploratory. The exploratory methods 'let the data speak' by identifying patterns with for instance factor analysis (also known as data-reduction and principle component analysis). We choose in this study for this second methodology, because it combines the insights from theory and empirical observations, and because it is a good methodology to develop indicators in emerging fields or research, when standards in definitions of concepts and statistical data are still lacking. An example of this exploratory approach is Srholec and Verspagen (2008; 2012) who take the broadest set of CIS variables into the analysis and use a two-step factor analysis. The result leads to four innovation strategies or modes, which Srholec and Verspagen have given the following labels: 'Research', 'User', 'External' and 'Production' (Table 18). Social responsibility is part of the mode labelled 'production'.

Table 18. Hierarchical factor analysis (2nd stage) on ingredients of firm innovation strategies: 4 modes

	(1) Research	(2) User	(3) External	(4) Production
R&D	0.70	0.07	-0.16	0.09
Marketing	0.07	0.65	0.01	-0.16
External inputs	0.16	-0.13	0.65	0.02
Product effects	-0.01	0.69	-0.03	0.15
Process effects	-0.08	0.06	0.02	0.81
Social responsibility	0.08	-0.07	0.01	0.83
Information from science	0.62	0.01	0.31	0.06
Information from clients and industry	-0.01	0.61	0.28	-0.07
Information from suppliers and events	-0.07	0.23	0.69	0.10
Formal protection	0.36	0.37	-0.27	0.05
Informal protection	0.42	0.35	-0.18	0.01
Non-technological innovation	0.00	0.53	0.02	0.12
Innovation co-operation	0.78	-0.06	0.06	-0.09

Source: Srholec & Verspagen (2012: 1237)

Studies which try to measure which kind of innovations (product/process/ organisational/marketing) generate more growth in terms of turnover or jobs give mixed results. Lachenmaier and Rottmann (2010) conclude that process innovations have a higher positive effect on employment than product innovations. Product innovations on the other hand are more often associated with growth in turnover. For policy makers, however, the lesson is that there are no good reasons to promote only one type of innovation, or one mode of innovation. Innovation policies which apply to a broader understanding of innovation and which are not limited to R&D or product innovation, are more likely to impact on growth of firms, and SMEs in particular (Wintjes 2014).

The fact that there are clear similarities in the modes, which are found in the various studies (using various methods and indicator sets, and with different focus of analysis in terms of countries or sectors), support the conclusion of Srholec and Verspagen (2012) that to a high degree these modes (and the heterogeneity they represent) can be found in all sectors and all countries. There is, so to speak, no

**No single best practice mode**

convergence to a single best practice mode of innovation. From an evolutionary, (eco-)system perspective, it is healthy to have this diversity, which allows for novel combinations. Therefore, policy makers should not reduce the variety of modes, but rather maintain the diversity, and for instance strengthen ‘weak modes’. This also implies that there is no single best practice policy, which policy makers can copy as a ‘one-size-fits-all’ policy from other regions or sectors. Designing the appropriate innovation policy mix for a given innovation system, calls for an interactive process in order to come to a tailored policy mix.

### 7.3 Results of Factor Analysis

First we present the results for factor analyses performed on the following groups of variables related to: input, objectives, obstacles, and output.

#### Number of supporting actors

The information collected with the 14 questions related to input (including the importance of resources, number of actors involved, and the rated knowledge base) has been reduced into five factors (Table 19). The first input factor we have labelled ‘Low nr. Supporting actors’, because it consists of two high, negative loadings for questions on the number of actors (inner core and supporters) involved in the SI. We notice that a low number of actors is associated with a relatively higher importance of political support as input (imp\_res\_politic).

#### Diversity of knowledge

The importance of: actor diversity, labour as a resource (e.g.: volunteers), and the use of external knowledge on the theme and target group, are together in input factor 2, which is labelled: ‘Diversity of knowledge’. The composition of this factor suggest that volunteers not only put in free labour, but also a different kind of knowledge on the theme and target group.

#### Social capital

Input factor 3 is labelled ‘Social capital’, which also includes high rated importance as a resource of relational capital (imp\_res\_rel\_cap) for the concerning SI. Input factor 4 is labelled ‘ICT & funding’ since this resource component consists of the co-importance of ICT and funding as a resource for SI.

#### Importance of knowledge, knowledge base, training & education

The 5<sup>th</sup> input factor consists of high factor loadings for answers on three knowledge questions: the importance of knowledge as an input, e.g. from experts, knowledge institutes, students (imp\_res\_experts), the rated internal knowledge base of the innovator concerning the theme and target group (KB\_int), and the rated importance of training and education as an input to the SI (imp\_res\_train).

Table 19. Types of resources /inputs to SI, pattern matrix of factor analysis

	INPUT FACTORS: TYPES OF RESOURCES/INPUT				
	1 Low nr. sup- porting actors	2 Diversity of knowledge	3 Social capital	4 ICT & funding	5 Knowledge
innercore	<b>-.853</b>				
supporters	<b>-.818</b>				
imp_res_politic	<b>.504</b>				.445
act_diversity		<b>.771</b>			
Imp_res_labour		<b>.628</b>			
KB_ext		<b>.574</b>		.525	
KB_bus		.511		.443	
imp_res_soc_cap			<b>.862</b>		
imp_res_rel_cap			<b>.858</b>		
imp_res_ICT				<b>.746</b>	
imp_res_cap				<b>.707</b>	.374
imp_res_experts					<b>.770</b>
KB_int					<b>.635</b>
imp_res_train					<b>.565</b>

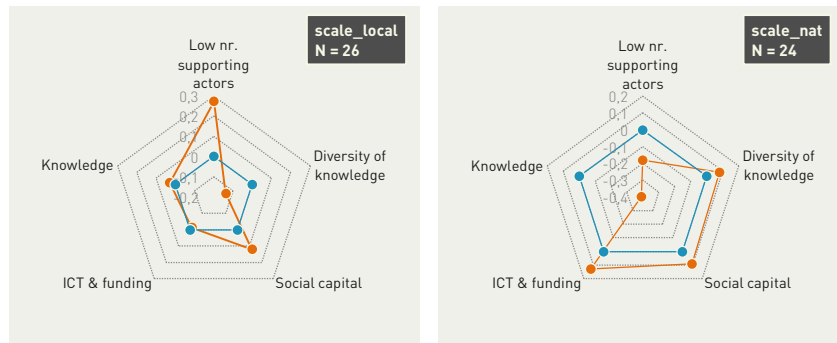
Note: Extraction Method: Principal Component Analysis. Rotation Method: Oblimin with Kaiser Normalisation.

Pattern matrix, rotation converged in 18 iterations. High factor loadings emphasised in bold, below 0.3 suppressed. Total variance explained by 5 factors = 64.6%

In Figure 18 we see that SIs which operate on a local scale have a far above average score on the factor 'Low nr. supporting actors'. Since the number of inner core actors and number of supporters has a negative loading in this factor, it means that the SIs which operate at local scale have on average a lower number of involved actors, and political support is more important for them, compared to SIs which operate at national scale. We have to note that respondents could indicate that the concerning innovation is implemented at several scales. SIs at a national scale have on average a relatively large number of actors and supporters, and political support is less important as an input. Often they operate in multiple locations. For SIs operating at the regional level the input profiles quite resemble those that are operational at national level, except for this factor concerning the number of actors, on which the position of those at regional level is in between the position of those at local and national level.

Operational level

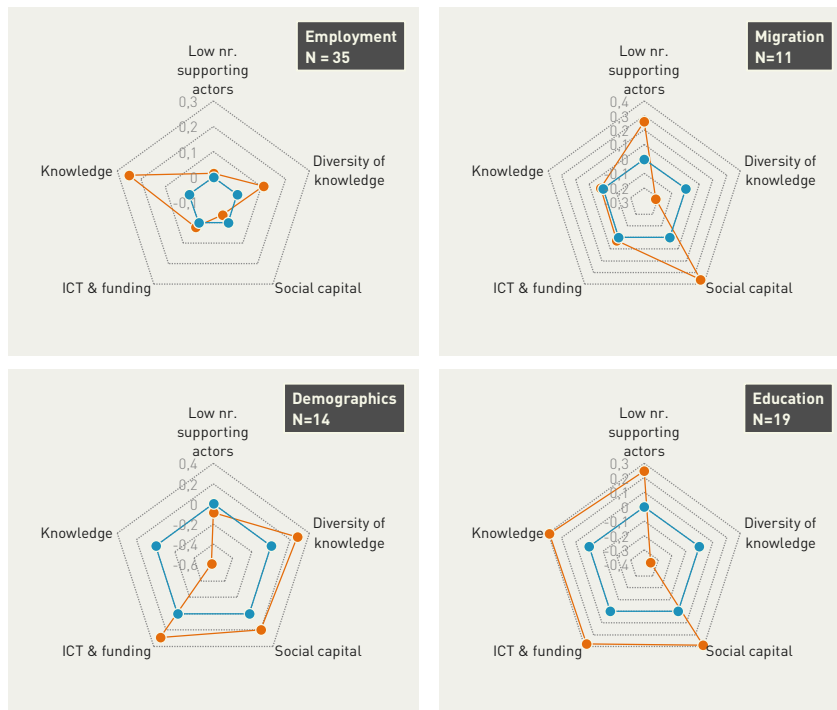
Figure 18. SI input profiles by geographical scale



**Geographic scales**

There are also other differences when we compare the SI input profiles of the cases according to the geographical scale at which they operate. For those with a local scale, the factor scores on 'Diversity of knowledge' is below average (indicated by the orange line, which is the average of all cases). This is more important for the SIs that operate at national level. Characteristic for those operating at national level is the relatively low importance of the input factor 'Knowledge'. The on average higher input factor scores for 'ICT & funding' suggests that at a national scale, investments in ICT become more important in relation to the diffusion (scaling out) or scaling-up of the innovation.

Figure 19. SI input profiles by theme

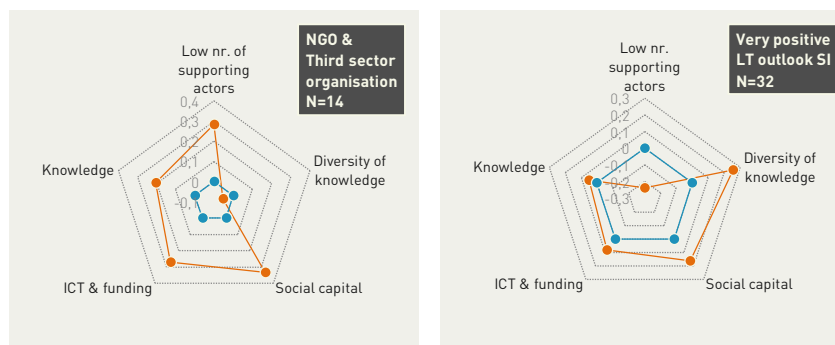




A high input factor score on 'Knowledge' and the relatively low importance of 'Social capital' as input is characteristic for SIs within the theme of employment (Figure 19). The on average low input-factor 'Knowledge', and a high score on the 'ICT & funding' component is characteristic for SI inputs in the field of demographics. The input profiles for SIs in the fields of migration and education have some similarities: low number of actors, low on 'Diversity of knowledge', and high on 'Social capital' as input factors. However, on average the factor scores for 'Knowledge' and 'ICT & funding' are higher for SIs in the theme of Education.

SIs from NGOs & third sector organisations have above average input-factor scores except on the factor 'Diversity of knowledge'. This kind of specialisation seems associated with a limited number of actors and collaborations, and a high importance of political support as an input. These 2 input factors which are characteristics of SIs by NGOs, actually seem to be associated with success, in the sense that high number of actors, and diversity of knowledge, seems characteristic for SIs with a very positive long term perspective (Figure 20).

Figure 20. SI input profile for NGOs & for innovators with a long-term outlook rated as very positive



Concerning the objectives (Table 20) the factor analysis results in two components, indicating two types of SI objectives, which we can name respectively: 'Public vs. Business', and 'Socio-economic target group'. The first factor involves a relatively high importance of the objective to improve public aspects for the target group, concerning for instance social cohesion, inclusion, lobbying, legitimation (obj\_pub\_cap\_target), while having at the same time a low rated importance for business opportunities (increase revenues/profit) as the objective of the SI (obj\_bus). The composition of this factor suggests that it is difficult to serve these two objectives with one SI.

The second objective factor is labelled 'Socio-economic target group', because both the objective to increase the personal & social value/capabilities of the target group, e.g. empowerment, health, life-skills and self-confidence (obj\_soc\_cap\_target), as well as the objective to increase the economic value of capabilities of the

target group, e.g. Employability or work-skills (obj\_ec\_cap\_target) show high loadings within this 2<sup>nd</sup> objective factor.

Table 20. Two types of SI objectives, pattern matrix of factor analysis

	FACTORS OF SI OBJECTIVES	
	1 Public vs. Business	2 Socio-economic target group
obj_bus	<b>-.620</b>	
obj_pub_cap_target	<b>.591</b>	.475
obj_mark_fail	.442	
obj_soc_cap_target	.386	<b>.665</b>
obj_ec_cap_target	-.590	<b>.640</b>
obj_compl		.309

Note: Extraction Method: Principal Component Analysis. Rotation Method: Oblimin with Kaiser Normalisation. Rotation converged in 2 iterations. High factor loadings emphasised in bold, below 0.3 suppressed. Total variance explained by 2 factors= 44.7%

## SI Obstacles

Regarding obstacles the analysis results in three components, which can be interpreted as three types of obstacles (Table 21). The first factor, which explains the largest share of the total explained variance comprises organisational and legal obstacles. This result confirms the analysis of the case studies that it is difficult for many social innovators to find one appropriate organisational form, and they therefore often chose for hybrid forms of organisation because of legal obstacles to combine their business and social objectives in one legal organisational form. We therefore label this first obstacle factor: 'Hybrid issue'. The second obstacle factor brings together societal/cultural, financial and political obstacles. When SIs face all these obstacles we can label the concerning SIs as 'radical'. A different kind of obstacle is in the third factor, where technological obstacles have the highest factor loadings, but also where market share (competition) is rate relatively high as an obstacle (imp\_obs\_mark\_share).

Table 21. Type of SI obstacles, pattern matrix of factor analysis

	THREE TYPES OF SI OBSTACLES		
	1 Hybrid issue	2 Radical SI	3 Technological competition
imp_obs_org	<b>.876</b>		
imp_obs_legal	<b>.833</b>		
imp_obs_soc		<b>.873</b>	
imp_obs_fin		<b>.703</b>	
imp_obs_political	.498	<b>.605</b>	-.318

THREE TYPES OF SI OBSTACLES			
	<b>1</b>	<b>2</b>	<b>3</b>
	<b>Hybrid issue</b>	<b>Radical SI</b>	<b>Technological competition</b>
imp_obs_tech			<b>.823</b>
imp_obs_mark_share			<b>.691</b>

Note: Extraction Method: Principal Component Analysis. Rotation Method: Oblimin with Kaiser Normalisation. Rotation converged in 13 iterations. High factor loadings emphasised in bold, below 0.3 suppressed. Total variance explained by 3 factors= 68.7%

With regard to the outcome questions, we report on the 6 factors resulting from the principal component analysis, which together explain 67% of the total variance (Table 22). The first two components both concern economic outcomes, but in the first factor we see high loadings of economic improvements for the social innovator in terms of financial sustainability, revenues, business capabilities and employment. In the second economic output factor we notice high factor loadings for impact on employment, income and work skills for the target group. A third type of output relates to social capital of the marginalised, in the form of impact on self-confidence of the marginalised (outc\_self\_conf), and improved networks of the marginalised (outc\_network). We have therefore labelled this outcome factor ‘social for target group’. The fourth outcome factor is labelled ‘Physical capability’, which also includes increasing ‘life-skills’. Outcome factor 5 is labelled ‘Public budget’, but we could also have labelled it ‘economy for government’. This impact factor is based on high factor loadings for: ‘Reduced public budget costs’ (outc\_SI\_pub\_budg) and ‘Other complements to public policy’ (outc\_public\_other). Finally, a 6<sup>th</sup> factor involves: ‘Other civic outcomes/benefits’ (outc\_civic\_other), but because of the lower contribution to the total explained variance, we do not show the scores on this outcome factor in the SI outcome profiles.

## SI Outcomes

Table 22. Types of SI output/outcome, pattern matrix of factor analysis

TYPES OF SI OUTPUT						
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
	<b>Economy in- novator</b>	<b>Economy target group</b>	<b>Social for tar- get group</b>	<b>Physical capability</b>	<b>Public budget</b>	<b>Civic other</b>
outc_SI_stability	<b>.856</b>					
outc_SI_rev	<b>.841</b>					
outc_SI_bus_cap	<b>.827</b>					
outc_SI_empl	<b>.817</b>					
outc_SI_mark_cap	<b>.776</b>					
outc_SI_netw	.691					
outcome_privateother	.665					
generate_rev	.580					.527
outc_SI_selfconf	.534		.468			

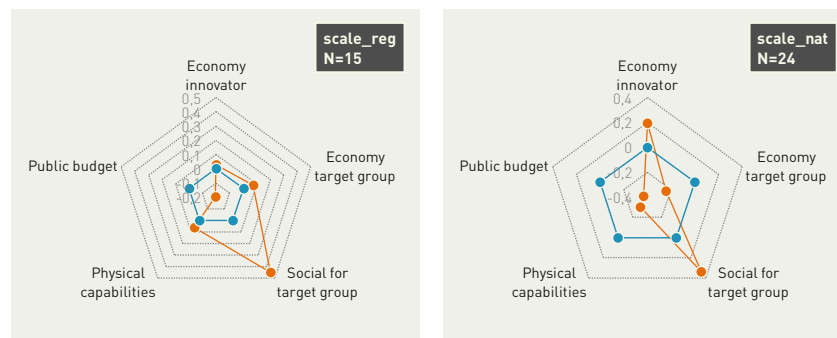
	TYPES OF SI OUTPUT					
	1 Economy in- novator	2 Economy target group	3 Social for tar- get group	4 Physical capability	5 Public budget	6 Civic other
outc_employment		<b>.983</b>				
outc_impr_income		<b>.897</b>				
outc_workskills		<b>.880</b>				
outc_network			<b>.744</b>	-.310		
outc_self_conf			<b>.691</b>			
outc_SI_cap_other	.522		.555			
outc_phys_cap				<b>.873</b>		
outc_lifeskills				<b>.713</b>		
outc_cap_other			.331	.430	.400	
outc_SI_pub_budg					<b>.772</b>	
outc_public_other					<b>.572</b>	.552
outc_civic_other						<b>.771</b>

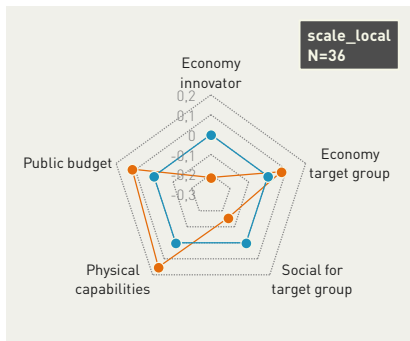
Extraction Method: Principal Component Analysis. Rotation Method: Oblimin with Kaiser Normalisation. Rotation converged in 40 iterations. High factor loadings emphasised in bold, below 0.3 suppressed. Total variance explained by 6 factors= 67.0%

### Outcome profiles

Looking at the outcome profiles, and comparing the average factor scores of the 15 cases with a regional scale with the averages for the 24 which are operational at national scale shows that the cases at regional scale on average generate more economic output for the target group, while the SIs at national level generate more economic impact for the social innovator (Figure 21). The average outcome profile of the SIs at local scale show a high score on the impact factors: ‘Public budget’, ‘Physical Capability’, and ‘Economy target group’. The economic impacts for the social innovators, the marginalised target group, and the public budget, seems to change with an increasing geographical scale. From SI at local level the economic impact for the target group and the public budget is on average higher, but from implementation at national scale the benefits for the innovator are better (Figure 21).

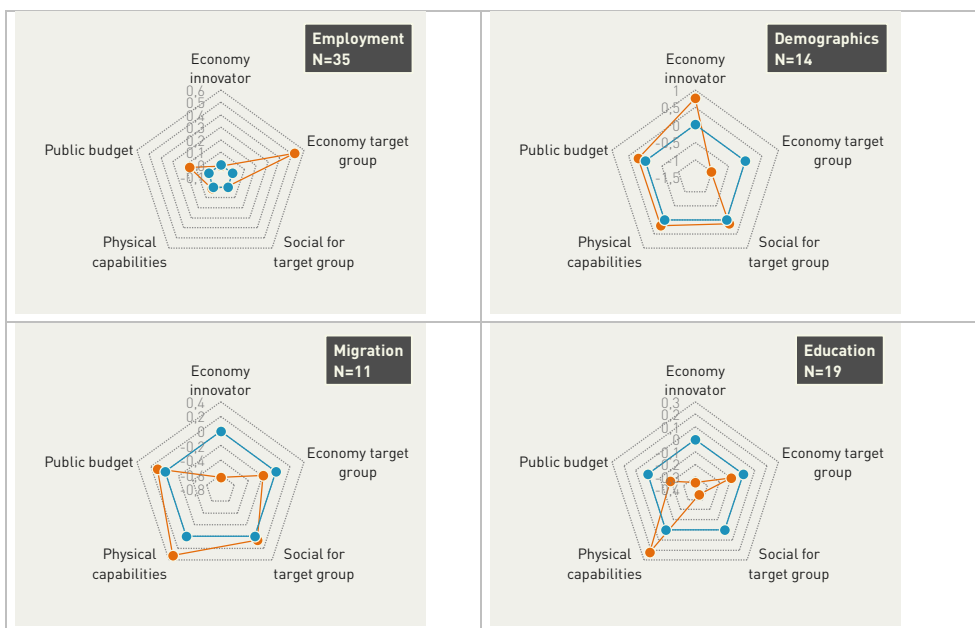
Figure 21. Outcome profile for regional and national and local SI scale

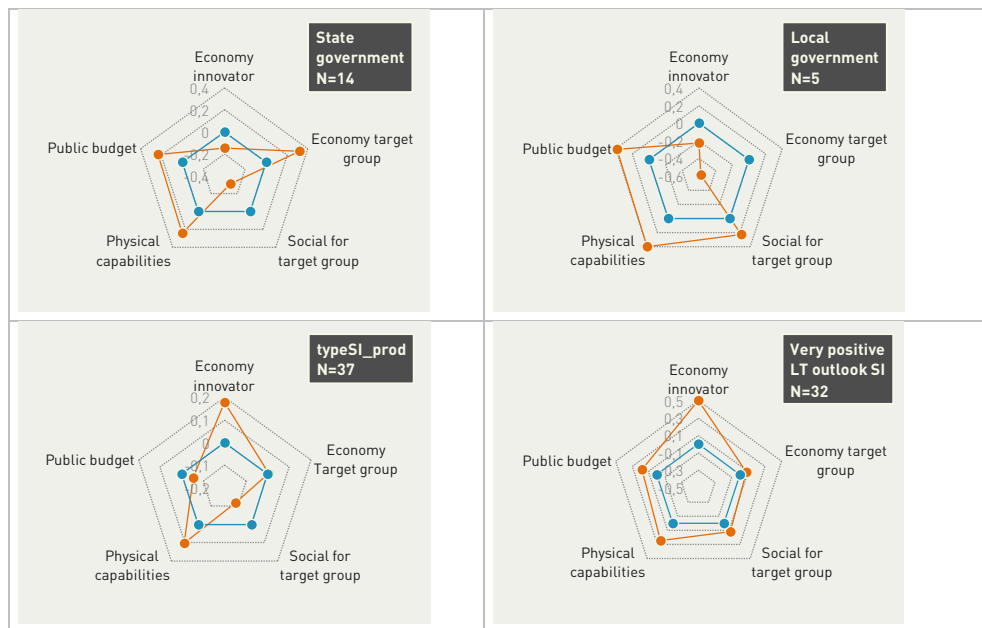




The average outcome factor scores by theme indicate that it is difficult for social innovators in the theme of employment to generate economic benefits for their own organisation (in terms of increased financial sustainability, increased revenues, increased management/business capabilities, and increased employment), but on average the economic impact on the target group is higher than for SIs from the other themes (Figure 22). For SI in the theme of demographics the average economic impact for the target group is rated relatively low, but one has to bear in mind that when the marginalised target group consists for instance of young children or elderly, outcomes in terms of increased employment or work skills are less applicable. Social innovators with innovations in the field of migration are struggling and characteristic is the on average low increase in management and business capabilities and networks for the innovators as an outcome of the innovation.

Figure 22 Outcome profile by theme, main funder, type of SI, and SI with very positive long-term perspective





### Outcome profiles by type of SI

When we compare the outcome profiles by type of SI we notice the good performance of SIs which address a new target group, except the very poor reported economic and business outcomes for the innovators themselves. Given the average good performance on the other outcomes policymakers could support social innovators with this apparently risky kind of innovation, e.g. with enhancing their management and business capacities. A product/service innovation is less risky for social innovators, since the rewards in terms of economic outcomes for the innovators are on average for the product innovators far above the average of all innovators. We have to note that respondents could indicate multiple types of innovations, but when the SI concerns a new product or service (in 37 cases) the economic outcomes for the innovator are on average high, but the score on the other outcomes are relatively poor, except on the outcome factor 'Physical capability' which also includes improved life-skills.

A difference by main type of funder can be observed between the local government and state government, in the sense that in the outcomes of the SIs funded by the latter show high scores on the factor 'Economy target group', and low scores on 'Social for target group'. On the other hand, the SIs which are mainly funded by the local government show low average scores on economic improvements for the target group, and high impact ratings on social impact for the target group. Both these two versions of the government as main funder have in common that the average SI outcomes in terms of benefits to the public budget and improved physical capabilities and life-skills for the target group, are above average.

A very positive long term outlook of SIs seems associated with good scores on all the outcome factors, but especially on the business economic outcome for the social innovators themselves.

## 7.4 Indicator Application in full SI Profiles at Micro Level

In this section we present the results of the factor analysis on all the main variables including inputs, objectives, obstacles, and outcomes. It results in 5 factors (Table 23): the first is ‘Economic for innovator’ which consists of high loadings for economic outcomes for the social innovator, including impact on financial sustainability, revenues, business capabilities, networks, employment and marketing capabilities of the innovator.

Economic outcomes for innovator

The label given to the second SI component is ‘Economic for target group’, and is based on economic outcomes for the marginalised target group in terms of employment, income, work skills, and the related objective (obj\_ec\_cap\_target).

Economic outcomes for target group

Factor 3 ‘F&S Capital dependency’ stands for dependency on financial and social capital. This label relates first of all to high financial obstacles and high social obstacles, but also to relative high importance of funding (imp\_res\_cap), but also ICT and relational capital as a resource. Factor 4 is we have labelled ‘Hybrid with volunteers’. The combination of organisational and legal obstacles is interpreted as an indication for ‘hybrid issues’ in relation to finding a proper legal form of organisation. The importance of labour as an input for SI often refers to unpaid work.

Dependency on financial & social capital

Factor 5 unites some social aspects with a negative loading for outcomes on life-skills of the marginalised (outc\_lifeskills), other civic outcomes or benefits (outc\_civic\_other), improved physical capabilities of the target group (outc\_phys\_cap), and for the related objective to increase the personal & social capabilities of the target group (obj\_soc\_cap\_target). On the contrary, the obstacle of competition is relatively high in this factor. Besides being an indicator for a low orientation of the SI towards social impact, the composition of this factor suggests that for SIs which are less oriented towards social impact, there is more competition from other SIs.

Social aspects

Table 23. Five components of SI; pattern matrix of factor analysis

	FIVE COMPONENTS OF SI				
	1 Economic for innovator	2 Economic for target group	3 F&S Capital dependency	4 Hybrid with volunteers	5 Low on social, competing SI
outc_SI_stability	.860				
outc_SI_rev	.832				
outc_SI_bus_cap	.805				

	FIVE COMPONENTS OF SI				
	1	2	3	4	5
	Economic for innovator	Economic for target group	F&S Capital dependency	Hybrid with volunteers	Low on social, competing SI
outc_SI_netw	<b>.758</b>				
outc_SI_empl	<b>.754</b>				
outc_SI_mark_cap	<b>.712</b>				
outcome_privatetheer	.671				
obl_bus	.601				
innercore	.402				
supporters	.400				
outc_employment		<b>.869</b>			
outc_impr_income		<b>.820</b>			
obj_ec_cap_target		<b>.802</b>			
outc_workskills		<b>.778</b>			
act_diversity		-.508		.405	
imp_obs_fin			<b>.683</b>		
imp_obs_soc			<b>.598</b>		
imp_res_cap		.371	<b>.560</b>		
imp_res_ICT			.544		
imp_res_rel_cap			.512		
imp_obs_tech			.441		
imp_res_soc_cap			.415		
imp_obs_org				<b>.806</b>	
imp_obs_legal				<b>.679</b>	.428
Imp_res_labour				<b>.550</b>	
imp_obs_political				<b>.541</b>	
outc_self_conf				.479	-.402
outc_SI_pub_budg				.468	
outc_network				.378	
outc_lifeskills					<b>-.755</b>
outc_civic_other					<b>-.598</b>
imp_obs_mark_share			.387		<b>.564</b>
obj_soc_cap_target					<b>-.554</b>
outc_phys_cap					-.537
imp_res_experts					-.399
KB_int					

Note: Extraction Method: Principal Component Analysis. Rotation Method: Oblimin with Kaiser Normalisation. Rotation converged in 27 iterations. High factor loadings emphasised in bold, below 0.3 suppressed. Total variance explained by 5 factors= 51.1%

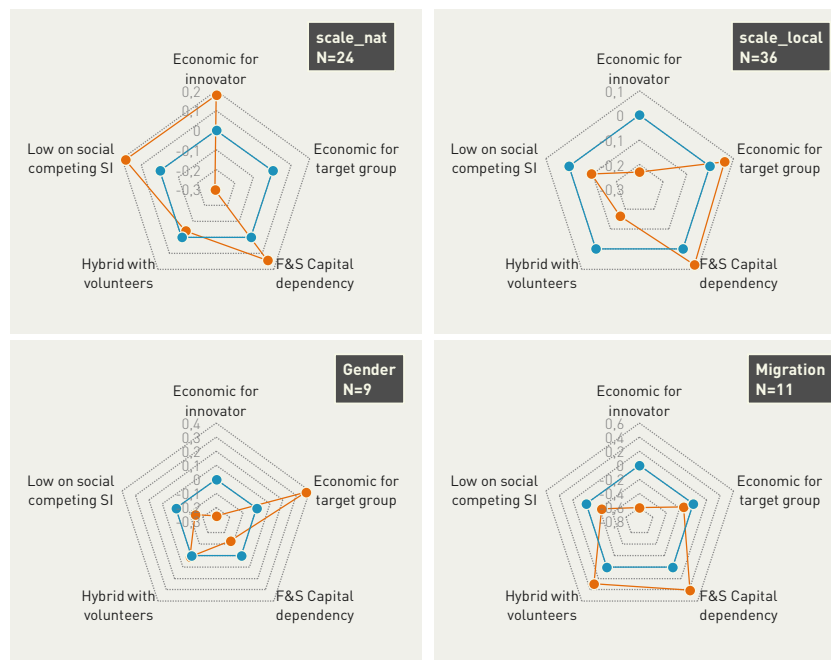
### Economic outcomes of SI implemented at local vs national level

Comparing the full SI profile for SIs implemented at local scale with those of innovations implemented at the national level (Figure 23) shows that for the local scale the factors ‘Economic for innovator’, ‘Hybrid with volunteers’, and ‘Low on social, competing SI’ are below average. On the contrary, at national scale the SIs are low on ‘Economic for target group’; ‘Low on social’ and high on economics for the innovator.



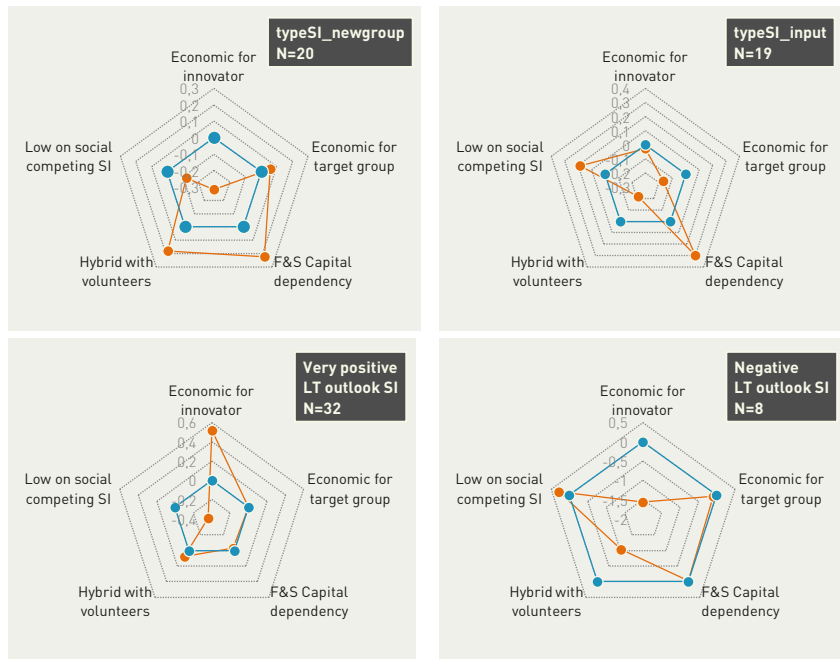
With regards to SI in the thematic fields of gender and migration, we have to bear in mind that the profiles are based on the average of a lower number of cases. However, we can see that the SI profiles for these themes have in common that they are both not 'low on social', but poor on 'economic for innovator'. For those in the migration theme, we notice a high average factor score for 'Financial and social capital dependency', and 'Hybrid with volunteers'. For SI in the theme of gender, economic benefits for the target group seem to be above average.

Figure 23. SI profile by scale of implementation and theme of SI



In 20 case studies the SI concerned a new target group (typeSI\_new group), in 19 cases the type of innovation has been identified as: 'New input (expertise, ICT, design-skills, material, etc.)'. For the new target groups as an innovation type we notice the above average score on the factors: 'Hybrid with volunteers', and 'F&S capital dependency', but low scores on 'economic for innovator' and 'Low on social, competing SI'. 'New inputs' as type of innovation seems associated with 'F&S capital dependency', and 'low on social', that is: relative low improvements of life-skills as an outcome for the marginalised. A very positive long term outlook on SIs is based on two characteristics. One is this highly social impact fields such as life-skills (the low score on 'Low on social, competing SI'), for which there seems to be limited competition from other SIs. The second characteristic is: 'Economic for innovator'. The 8 cases with a negative long term outlook indeed have a below average score on 'Economic for innovator', and higher scores for 'Low on social, competing SI' (Figure 24).

Figure 24. SI profiles by type of SI, and long-term outlook, based on average factor scores



## 8 INDICATOR BASED PROFILING OF SOCIAL INNOVATION AT THE LEVEL OF EUROPEAN REGIONS

### 8.1 Regional Data

As discussed earlier in the SIMPACT project, and as witnessed by other literature (Hubrich, 2012; and Krlev, Bund & Mildenerger, 2014), the measurement of SI is all but a straightforward exercise. In several incremental steps we have constructed an expanded blueprint for the measurement of the economy-wide “macro” dimensions of SI (see Annex). In this blueprint we tried to incorporate both the SI potentials and needs, as a mirror for the economic principles of supply and demand (and input and output), as well as covering tangible and more importantly intangible assets which could be such potentials and needs. During this theory driven process, there comes a moment that one also has to take a practical approach by departing from the exploration of existing data sources, since it will take many more years before statistical offices will produce standardised data on SI from European surveys. Departing from existing data we could first take in the possible traditional economic activity metrics. Although not all of the earlier explored metrics are obtainable at this point in time, we have tried to find alternatives to substitute for these earlier metrics.

SI potential & needs

In our practical exploration of macro-data and subsequent analysis we try to highlight metrics which signify “use value” or at least include some indicators which have a “use value” component. This value component in economic activities is less easily measurable, at least not in the traditional way. Ethical, environmental, human rights, community and societal benefits are all less easily visible and measurable as they concern non-financial and non-physical resources but they are the main contributors to human welfare or better-said well-being. But, even if this use value is not directly visible there are still data and information that could be gathered on important “Use value” components such as:

Use value & value component

- trust in government, institutions, policies, third sector initiatives and community actions (Nicholls 2009)
- interest in, and recognition of, the needs of marginalised communities
- capacities to, resolve problems, address needs and conflicting interests, and act on emerging conflicts
- participation in common causes, working for the common good

To a large extent, these components can also be referred to as SI process-indicators. Trust and quality of governance are examples, as metrics on these issues can serve as SI input, SI output, as well as SI process indicators.

#### Inclusion of survey data

The inclusion of metrics from surveys such as the one feeding the OECD Better Life Index<sup>26</sup>, or the European Social Survey<sup>27</sup> could provide such viable alternative metrics. In addition, more generic economic oriented metrics can be adapted and interpreted for use in a “landscaping” to discover the potential and propensity to Socially Innovate in the EU. This landscape can consist of economic, or more socially orientated, macro indicators as suggested by the TEPsIE project (Hubrich, 2012) and a follow up paper by Krlev, Bund, and Mildemberger (2014). Many have focused on national indicators, but at the same time all emphasise the importance of the local context concerning SI. Working with regional data would therefore mean a considerable improvement with respect to measurement at the macro level. We find that there is ample scope to include more regional indicators, of which some on NUTS3 level. In addition, the inclusion of more contextual, qualitative and quantitative, data is an option through use of sources such as the earlier mentioned OECD and European surveys and a deeper interpretation of the data provided by standard, but highly relevant, sources such as the EU Statistics on Income and Living Conditions (SILC) and the EU Labour Force Survey (LFS).

## 8.2 Explorative Methodology: Categorisation of EU Regions on SI Components by PCA

#### Patterns in SI metrics

In order to identify the main types of SI eco-systems at regional level, multi-variate methods of data-reduction (principal component or factor-analysis, and cluster-analysis) are very appropriate to identify patterns in the SI metrics, which can be used to make a typology of SI systems at regional level. As explained in the OECD/JRC Handbook on constructing composite indicators (Nardo & Saisana 2005) Principle Component Analysis (PCA) and Factor analysis are useful in constructing composite indicators. They refer to application for traditional, technological and business innovation, explaining that, since there are many potentially relevant indicators concerning knowledge, innovation, economy and society, there is a need for data reduction techniques. These statistical methods identify the statistical relations between the various individual indicators and based on that provide the main factors or components. The same methodology is used in the literature discussed in the previous section answering the question ‘how firms innovate?’, by identifying different modes of innovation at firm level. This explorative methodol-

---

<sup>26</sup> See OECD: <http://www.oecdbetterlifeindex.org/>

<sup>27</sup> See Norwegian Social Science Data Services (NSD) and: <http://www.europeansocialsurvey.org/>

ogy can also be used at the systems level, for identifying different modes of innovation at systems level (Wintjes 2016). As examples of applying the method of factor analysis for identifying types of national/regional innovation systems in Europe, we refer to Dunnewijk et al. (2008), Wintjes & Hollanders (2010), and Wintjes & Hollanders (2011). For instance, after applying a two-step factor-analysis, Wintjes & Hollanders (2011) use a cluster-analysis to come to the main types (or modes/models) of regional innovation systems. For the same arguments as put forward in the above literature, these methods are also appropriate to categorise EU regions on components of SI.

Using the expanded blueprint and the theoretical and practical considerations as detailed above, we set about collecting data from a number of resources. Data has, amongst others, been taken from DAFNE (Donors and Foundations Networks in Europe), the World Giving Index, OECD How's Life: Measuring Well-being, The European Social Survey, the EU Regional Innovation Monitor survey, and from EURO-STAT's regional data.

In the below Table 24 we show a sample of the metrics, or variables, retrieved. For instance, variables 1 and 2 are a practical example of the “use value” metrics or components which we mentioned in the second paragraph of this chapter.

Table 24. Sample of variables in the database

Variable	Potential/ Need	Tangible/ Intangible	Source
1 Trust in the European Parliament	Need	Intangible	ESS
2 Trust in the legal system	Need	Intangible	ESS
3 Employees who are involved in life-long learning	Potential	Intangible	Eurostat
4 Students leaving compulsory education	Need	Tangible	Eurostat
5 Early leavers from education and training	Need	Tangible	Eurostat
6 Size of public sector: Employment	Potential	Tangible	Eurostat
7 Size of public sector: Government expense on operating activities and services	Potential	Tangible	World Bank
8 Helping or attending local area activities	Potential	Intangible	ESS
9 World Giving Index	Potential	Intangible	WGI
10 Safety as a part of well-being	Need	Intangible	OECD

With these metrics we try to capture the trust related landscape. These are intangible assets as they non-physical, non-monetary, “goods” which are non-the-less an integral part of SI in the EU. Variable three is a good example of an indication of potential, or an input-indicator. Here we measure the number of employees who are engaged in life-long learning, after their formal education career. An increase in

knowledge during life is a clear potential for innovation and it is this last part (actually an intangible asset) that we are measuring. We also use similar variables, such as 4 and 5, which can be used as controls. These variables should have a similar value in the analysis although they might be present in different factors depending on the context. Some subjects are made up of different components which are interesting to test separately. One such subject is the size of the public sector, where size could be its workforce or it could be the financial assets deployed. Variables 6 and 7 cover these aspects. Other more difficult to measure variables are the ones focusing on the philanthropic nature of people and society. The inclination for people to help others or donate money can nevertheless be captured as is shown by variables 9 and 10. Finally a number of variables are included which measure the importance that people attribute to certain aspects in life, such as adequate housing, having a job etc. Variable 10 'Safety as a part of well-being' is an example of this (Table 24).

**265 SI metrics  
plus 5 comparison/  
control metrics**

In sum we have retrieved 265 SI related metrics and an additional 5 metrics for comparison and control purposes. Of these 271 metrics 8 are available at the national level only. This availability of data at regional level is contrast to what previous research has mentioned. The remaining data is then on NUTS1 and NUTS2 level. We have used the existing data to extrapolate to the NUTS2 level in order to have sufficient coverage for all variables. In doing so we ended up with a database of 360 regions (NUTS0-2) and 271 variables.

Some may claim that we have used a too broad set of indicators. Others might question why we have not included indicators on environmental issues, health or security. Given the SI themes of SIMPACT, it is quite a broad set of indicators, but since this kind of empirical exercise has not been done before, it is better to start with a broad set, and narrow it down in the course of time. Moreover, some may want to steer the indicator set towards a specific theme of SI, within this set.

**Obstacles associated  
to large data sets**

In such a large database, there are of course a few issues, which can obstruct the statistical analyses of the data. The two most important problems in this respect are missing values and large differences in scaling of the variables. In order to overcome these problems, we have first imputed the missing values with a mean value corresponding to the mean of the series. Next, we have standardised, or normalised, the values for each of the data series to obtain normal distributions (z-scores) ready for further calculation. These are both normal procedures, which generic software packages such as STATA and SPSS can perform.

Due to large size of the database, there is a need to reduce the data without losing too much of the information the metrics themselves contain. This we have done using a Principal Components Analysis (see the next section). Because we assume

that all the variables are correlated we use an oblique rotation method (Oblimin with Kaiser Normalisation).

In a next step, with the factors retrieved from the PCA we have done two regressions in order to test the impact of the resulting SI factors or components, namely the impact on regional GDP and in another regression the impact on a more holistic, intangible and social output indicator which looks 'beyond GDP', namely a Regional Human Development Index. We have tried to analyse how our SI metrics relate to this regional index of socio-economic development. In a second comparison we have used regional GDP per capita data to relate the SI metrics to regional income or productivity as the more tangible economic outcome. In this way we hope to capture both the economic and social relevance of SI as witnessed by the collected data.

### 8.3 Results of the Factor Analysis

Table 25 shows the pattern matrix of the factor analysis. In this matrix we find the solution of the PCA as described above. There is a clear distinction noticeable in the division of the variables and their weightings over the 5 components. In the table you can see the variables ranked according to the largest value starting component 1 and with less significant values, with a weight below 0.30 suppressed.

Table 25. Factor analysis on regional indicators: five SI components, pattern matrix

	1 Governance vs. Civil	2 Unemploy- ment	3 Trust in State & New ideas	4 Failing Education	5 Engage- ment
Helping a stranger	-0.899				0.33
World Giving Index	-0.839				
Citizens are treated equally in public education	0.823				
Corruption persists in law enforcement	0.733				
Other citizens use bribery to obtain public services	0.713				
Quality of Government index	0.688				
Share of part time employment in total employment	0.669				
Housing as a part of well-being	0.646				
Quality of law enforcement	0.636				
Most people can be trusted	0.579				
Corruption persists in regional elections	0.572				0.323
Environment as a part of well-being	0.554			0.429	
Quality of public education	0.503				
Share of innovators cooperating with others	0.482				0.344

	1 Governance vs. Civil	2 Unemploy- ment	3 Trust in State & New ideas	4 Failing Education	5 Engage- ment
Female educational attainment: Ter- tiary education	0.474	0.332			
Most people treat you fair	0.456				
Structural funds allocations on innova- tion	-0.409				
Independence/Autonomy on RTDI	0.404				
Income as a part of well-being	0.402				0.324
Male educational attainment: Tertiary education	0.398				
Safety as a part of well-being	0.361				
Youth unemployment		<b>0.866</b>			
Total unemployment		<b>0.865</b>			
Female unemployment		<b>0.859</b>			
Employees who are involved in life- long learning		<b>0.850</b>			
Estimated total international immigra- tion		<b>0.842</b>			
Future international migration: Extrap- olation for 2020-2030		0.807			
Size of public sector: Employment		0.527		-0.464	
Students leaving compulsory educa- tion without a diploma		0.508			
Regional population density		0.317			
Trust in the police			<b>0.866</b>		
It is important to think new ideas and be creative			<b>0.864</b>		
It is important that government is strong			<b>0.829</b>		
Trust in the European Parliament			<b>0.818</b>	0.330	
Trust in the legal system			<b>0.815</b>		
It is important to try new and different things			<b>0.813</b>		
Trust in politicians	0.348		0.693		
Feeling people in local area help each other			0.643		
Helping or attending local area activi- ties	-0.344		0.573		
Feeling close to people in local area			0.447		
Independence/Autonomy in general					
Education as a part of well-being				-0.896	
Educational attainment: Less than pri- mary and lower secondary				<b>0.887</b>	
Early leavers from education and training				<b>0.764</b>	
Jobs as a part of well-being	0.315			-0.676	
Long term unemployment				0.634	
Self-employed persons as part total employment				0.614	
People at risk of poverty				0.579	-0.383
Accessibility to services	0.506			-0.563	



	<b>1</b> <b>Governance vs. Civil</b>	<b>2</b> <b>Unemployment</b>	<b>3</b> <b>Trust in State &amp; New ideas</b>	<b>4</b> <b>Failing Education</b>	<b>5</b> <b>Engagement</b>
People at risk of poverty or social exclusion				0.502	-0.388
Infrastructure as part of well-being				-0.492	0.301
Internet access	0.398			-0.428	
Net migration plus adjustment	0.302			-0.411	
Annual expenditure of the municipal authority per resident				-0.358	
Size of philanthropic sector: Number of organisations	0.347			-0.369	-0.686
Civic engagement as part of well-being					<b>0.663</b>
Share of innovators receiving public financial support					<b>0.588</b>
Size of public sector: Government expense on operating activities and services				0.339	<b>0.571</b>
Share of companies that introduced a service innovation					<b>0.523</b>
Business sophistication		0.44		-0.371	0.493
Per capita number of small firms					0.464
Health as a part of well-being	0.371			0.341	0.422
Share foreigners in the regional population					0.422

Extraction Method: Principal Component Analysis. Rotation Method: Oblimin with Kaiser Normalization.

a. Rotation converged in 17 iterations.

In the first regional factor, which we have labelled ‘Governance vs. Civil’ we see high loadings (negative) for ‘helping a stranger’ and the World Giving Index, together with high loadings for many governance issues, e.g.: ‘citizens are treated equally in public education’. Since factor analysis can be seen as an impressionistic method, there is room for various interpretations of the different factors or components. With a more cynical view we could say that in factor one we see people enjoying a high quality of life; well-educated and with a good job, enjoying good services in a safe environment, but at the same time not very open to giving and helping others in need. Perhaps an exponent of an increasing individualistic society?

We will give room for further interpretations by providing a map showing which regions have a high score on this regional SI component which we have labelled ‘Governance vs. civil’ (Figure 25).

Figure 25. Regional score on 'Governance vs. civil'

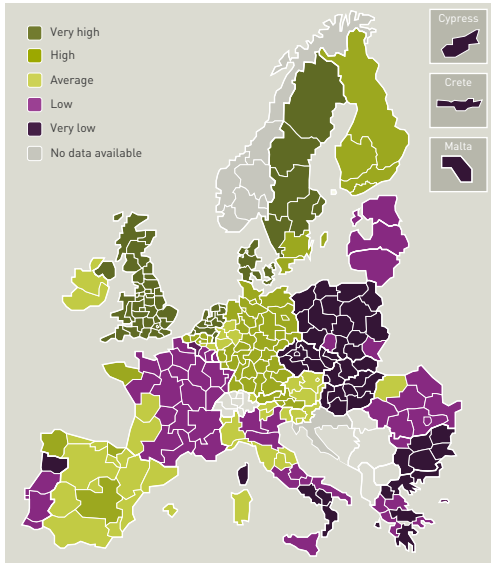
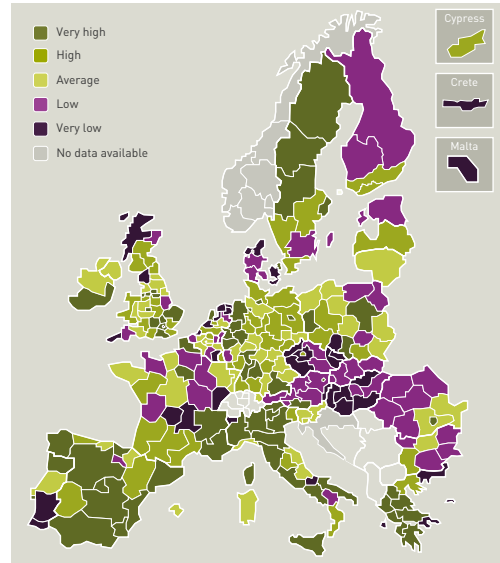


Figure 26. Regional scores on 'Unemployment'



### Unemployment

Factor two is simply labelled 'Unemployment', but it is not as simple as that, since it also includes Life-Long-Learning (LLL), immigration, and for instance size of the public sector in terms of employment. We do note that the regional data on these issues refers to the situation of several years ago. The map (Figure 26) shows that this SI component is geographically very fragmented across Europe. Of course, there is quite some regional variation within this component, e.g. among the top-10 high scores on this SI Factor 2 'Unemployment' the scores of Spanish regions such as Madrid, Andalusia and Barcelona are to a large extent based on high unemployment rates, but the very high scores on this factor for many other regions in this top-10 (e.g.: for Lombardia, London and Berlin) are based to a large extent on other variables with high loadings within this factor (such as LLL, immigration, public sector, and population density).

### Trust, new ideas & cohesion

Factor three revolves around trust, new ideas, and cohesion; important intangible social metrics. Based on the first few high loadings we have labelled this Factor 3: Trust in the State & new ideas, but besides trust in the police, strong government, and new ideas it for instance also includes with slightly lower loadings: 'Feeling people in local area help each other' and 'Helping or attending local area activities'. High scores on this SI factor can be found in regions of west Germany, Spain, and Northern Italy (Figure 27)Figure 26.

Figure 27. Regional scores on 'Trust in State & new ideas'

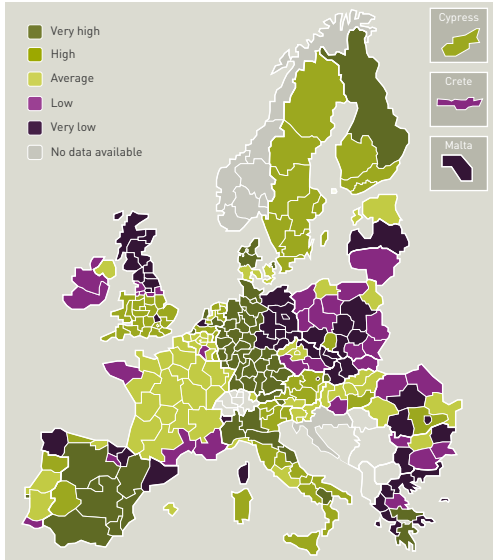
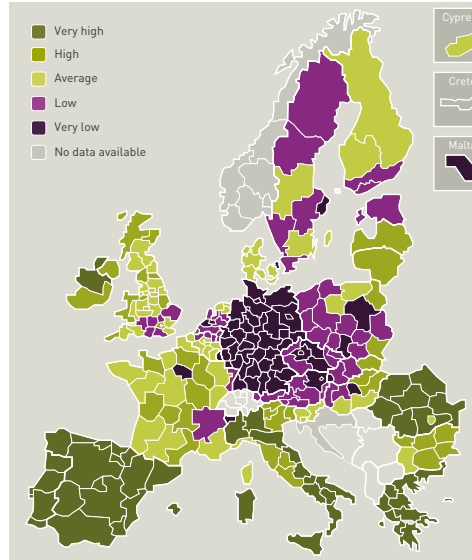


Figure 28. Regional scores on 'Failing education'



Factor 4 we have labelled 'Failing education', because it scores high on the following variables: 'Education as a part of well-being' (negative), 'Educational attainment: Less than primary and lower secondary', 'Early leavers from education and training', 'Jobs as a part of well-being' (negative), and 'Long term unemployment'. This factor also goes with a high rate of people at risk of poverty and low level of accessibility to services. High score on this factor can for instance be found in regions in Spain, southern Italy and Greece (Figure 28).

Failing education

The fifth factor is called: 'Engagement' because 'Civic engagement as part of well-being' is very high, but it is not of the kind that is represented by the philanthropic sector. This factor also includes innovation policy and service innovation. High scores on this factor can be found in for instance: France, Belgium, Netherlands, and Denmark (**Fehler! Verweisquelle konnte nicht gefunden werden.**).

Engagement

## 8.4 Results of the Regression Analyses: Impact on GDP and beyond

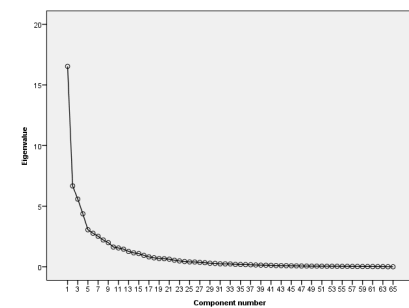
In this section we present the results of the regressions and a comparison thereof. As discussed earlier we collected over 270 macro variables, which have a bearing on SI. However, such a large number of data, with different properties, present a challenge when it comes to interpretation. A statistical way to solve these challenges is to reduce the data by rescaling and simplifying. The general method used for this is through a principal component analysis (PCA). In this PCA we reduce the

data we have on 265 variables to 5 factors. The remaining variables are used as dependent variables for the regressions.

We have first resolved the issues of missing values by substituting these with the appropriate mean. Next, we have standardised the values as the data has different scaling and properties, which need to be aligned so as to prevent any skewness in the outcomes.

In the below scree plot (Figure 29) we can observe the eigenvalue curve, where the “elbow” of the curve appears at about 5 components. We therefore use this number for our regression.

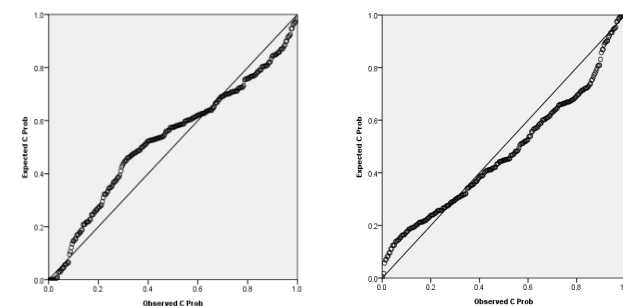
Figure 29. Scree plot with eigenvalue curve



After the required data manipulation and PCA we are interested in discovering whether our data is indeed fit for a comparison by checking whether the expected cumulative probability of the standardised values (Z-scores) follows a, near, equal path as the observed Z-scores. This we do using a P-P plot.

We have selected the Regional Human Development Index variables and the Regional GDP variables as our dependent variables and below we show the P-P plots for both (Figure 30).

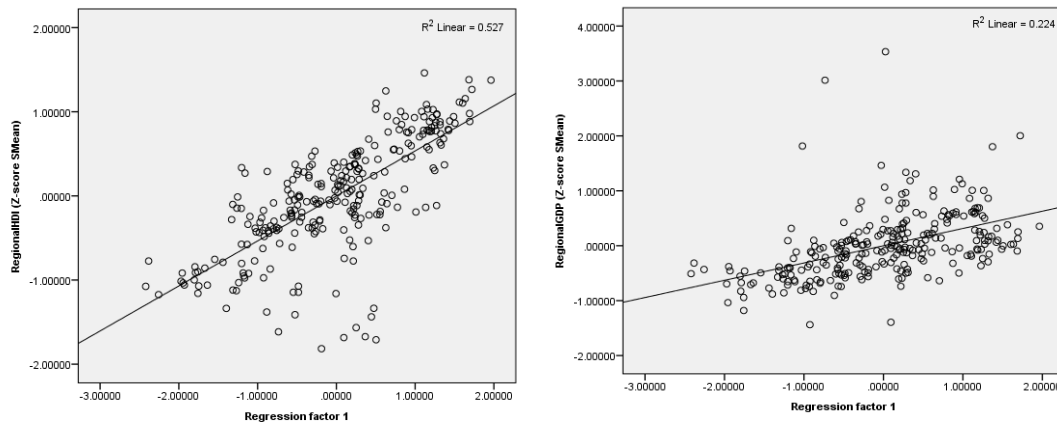
Figure 30. P-P plots for Regional Human Development Index and Regional GDP per capita



In both plots the curves follow a sufficiently linear path for us to be able to state that there is a normal distribution. Of course, we need to take into account the large number of variables and the variance in the types of variables we are dealing with in this exercise as stated before.

On the following two pages a comparison is made of the 5 factors, with on the left the Regional Human Development Index (Regional HDI) as the dependent variable, and on the right the Regional GDP as a dependent variable.

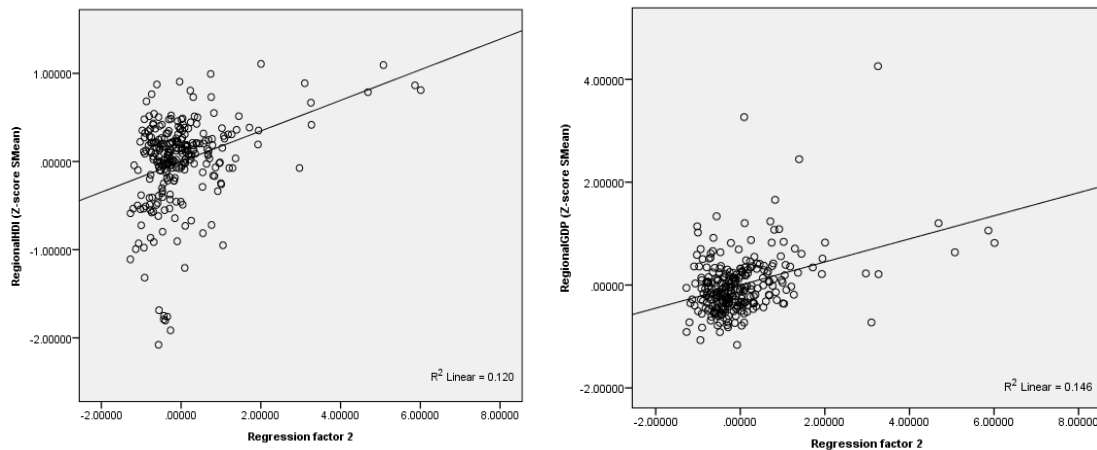
Figure 31. Regressions for regional SI Factor 1: 'Governance vs. Civil' with Regional HDI (left) and GDP (right) as dependent variables



The regional SI factor 1: 'Governance vs. Civil' is positively related to both regional HDI as well as GDP per capita, so this SI component indeed seems to impact GDP, and beyond (Figure 31). The policy lesson of this SI factor is not that we should stop helping strangers, but that quality of governance of our societies matter, and that SI can be more than the 'feel good' factor of helping strangers.

SI component impacts GDP and beyond (HDI)

Figure 32. Regressions for regional SI Factor 2: 'Unemployment' with Regional HDI (left) and GDP (right) as dependent variables



The regional SI Factor 2 ('Unemployment') with high loadings for unemployment could be seen as an indicator for SI needs. However, we could interpret the lack of a negative impact on the chosen output indicators (Figure 32), as an indication that

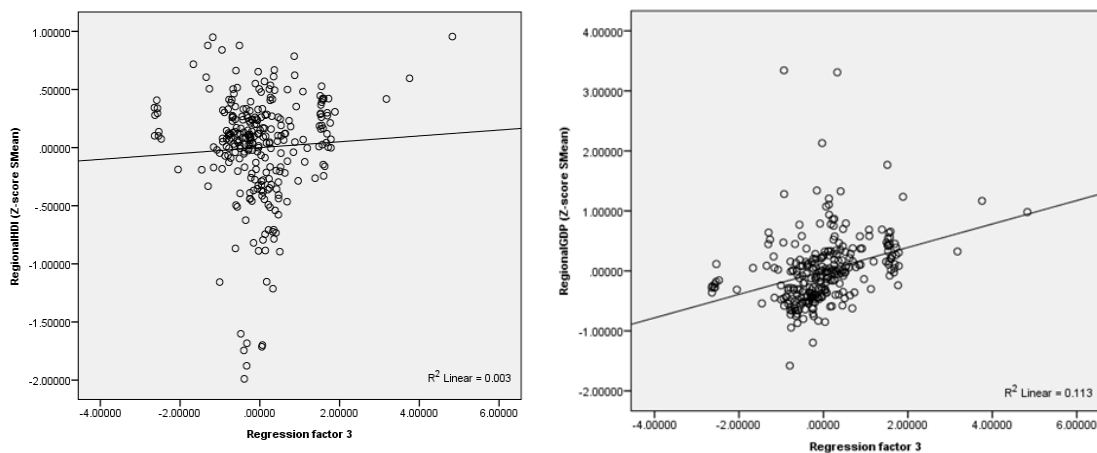
Unemployment as indicator for SI needs

also the SI solutions are included in the same factor: e.g. the involvement in life-long-learning, which is also part of this factor. This further suggests that hidden in this factor are SIs with similar characteristics and impacts: ‘Life-long-learning’ kind of SIs, which can be found under many SI themes, but especially: the themes of employment and education.

**Trust in State & new ideas do not impact HDI & GDP**

Regarding the regional SI Factor 3 (“Trust in State & new ideas’) we can conclude that there seems to be no relation with either one of the output indicators (HDI and GDP per capita) (Figure 33). Based on each of the separate elements of this regional SI component one would rather expect this factor to have a positive impact. We do not see many social needs concentrated in this factor, but rather elements of potential, e.g.: people trust the government; they see the importance of thinking new ideas; and they feel people in local area help each other. Perhaps this factor relies too much on new ideas for SI managed or promoted by the State, and as such could be seen as an under-used potential for SI initiated at grass-roots level, or animated in cooperation with a less ‘strong’ government, in a less ‘top-down’ mode of interaction and SI policy.

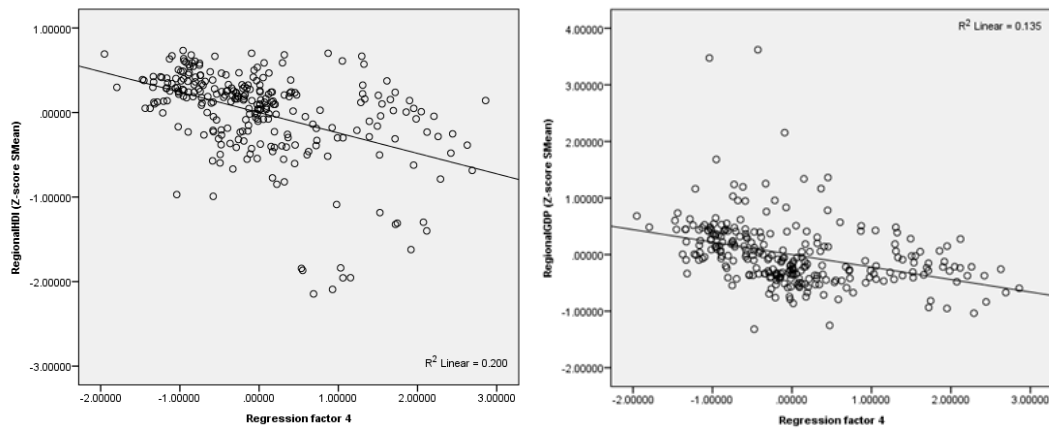
Figure 33. Regressions for regional SI Factor 3: ‘Trust in State & new ideas’ with Regional HDI (left) and GDP (right) as dependent variables



**Failing education negatively affects HDI & GDP**

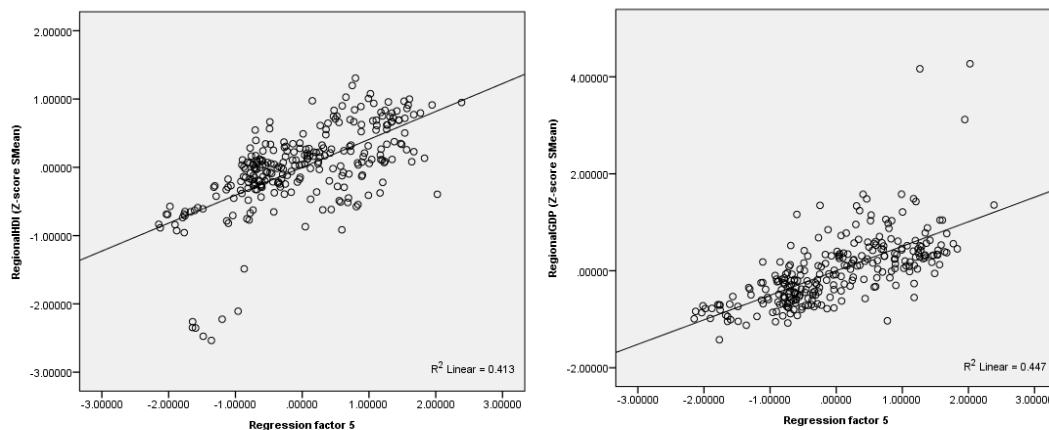
Concerning the Factor 4 ‘Failing education’ there is a negative relation with both output indicators (Figure 34). Besides better and more education, the composition of this factor suggests to policy makers that also addressing labour market issues, increasing access to services and infrastructure, and increasing access to internet are potential remedies and SI themes to better address the SI needs associated with ‘Failing education’.

Figure 34. Regressions for regional SI Factor 4: 'Failing Education' with Regional HDI (left) and GDP (right) as dependent variables



We conclude that especially the regional SI factors 1: 'Governance vs. Civil' and 5: 'Engagement' are positively related to both HDI as well as GDP per capita. Factor 2 ('unemployment') and Factor 3 ('Trust in State & new ideas') do not seem to have an impact on either one of these output indicators. The 4<sup>th</sup> regional SI factor 'Failing education' has a negative impact on both these two output indicators.

Figure 35. Regressions for regional SI Factor 5: 'Engagement' with Regional HDI (left) and GDP (right) as dependent variables

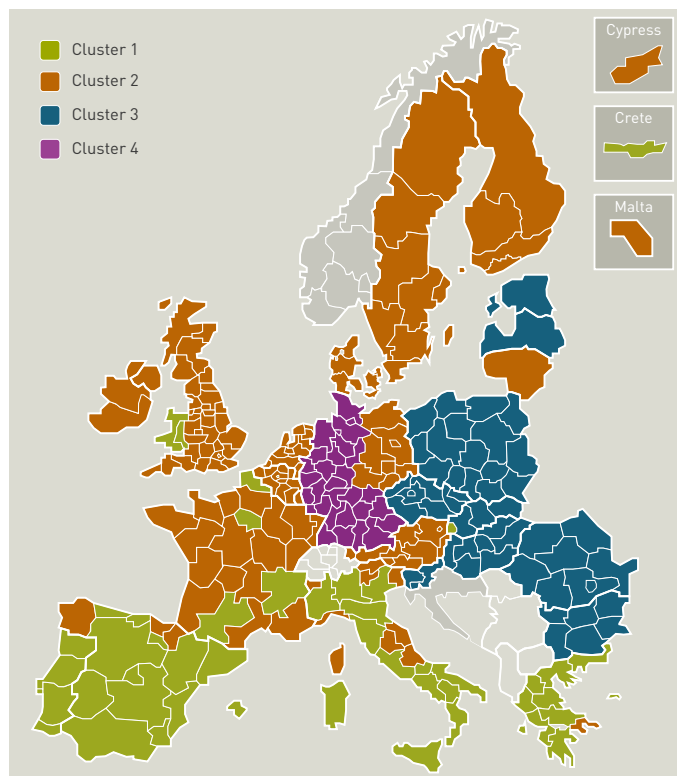


## 8.5 Results of Cluster Analysis & Application of Regional SI Profiles

The final step in our methodology consists in clustering the PCA factors, and consequently the EU NUTS2 regions, into 4 clusters as four types of SI-eco-systems. For this we used the hierarchical clustering Ward method which is a minimum variance method focused on minimising the within cluster variance of the factors. Ward's minimum variance criterion minimises the total within cluster variance. At each

step of the clustering, the method merges pairs of clusters with a minimum cluster distance. In other words: at each step the method searches for a pair of clusters that leads to the minimum increase in total within-cluster variance after merging. This increase is a weighted squared distance between cluster centres, which must be a squared Euclidean distance. The resulting cluster solution and the corresponding classification of regions is translated into a map (Figure 36).

Figure 36. Four types of SI regions in Europe



#### The 4 European SI regions

We find that Cluster 1, e.g. the green coloured regions, very much represent the Mediterranean region as well as three large urban regions; London, Paris and Brussels, but also Nord-Pas-de-Calais, and Bratislava. The second Cluster (2) which is coloured orange represents much of Nord-western Europe as well as Austria, parts of Italy and a few regions in Spain and for instance also the urban region of Athens, and Cyprus. The third Cluster (3) is coloured cyan and exclusively East-European in make-up and does not include other European regions. Finally, Cluster number 4 (yellow) is made-up of the “old” West German regions.

When we average the regional factor-scores for the regions in cluster 1 (the green ones on the map) we notice that this type of region is characterised by a low score on the factor ‘Governance vs. Civil’, but a high score on ‘failing education’ and ‘un-employment’ (Figure 37).



The average factor-scores of the 133 regions which are in Cluster 2 (orange) indicate that this type of SI region has on average high scores on the factors ‘Governance vs. Civil’ and ‘Engagement’, while having below EU regional average scores on the factors ‘Failing education’, and ‘Unemployment’. The cluster 3 type of SI regions can be characterised by below average score on ‘engagement’ and less high average scores for ‘failing education’ and unemployment than the average of cluster 1. The cluster 4 west-German type of SI region has on average relatively high scores on ‘trust in State and new ideas’.

Figure 37. Macro SI profiles for the four types of SI regions in Europe



The regional SI profiles can also be used to compare the macro-SI profiles between other groups of regions or countries. We give some examples.

### Comparison of macro SI profiles

The 35 regions – for which we have a SIMPACT SI in our database within the theme of employment – have a different score of the regional SI factors than the average EU region (Figure 38). Especially the factor ‘Unemployment’ is much higher, which off course makes much sense. The average regional characteristics of regions where SIMPACT cases of SI originate for the theme of ‘Demographics & Migration’ are quite similar: with higher levels of ‘Engagement’ and ‘Governance vs. civil’, and low on ‘Failing education’. Interestingly, SIs in the field of education can be found in re-

gions with very low scores on ‘failing education’, but with high scores on ‘unemployment’. The regional SI profile of the cases in the Employment theme and the average regional SI profile of the cases in the theme of education are quite similar. Also the regional SI profiles of the cases in the theme of Demographics and those in Migration are quite similar.

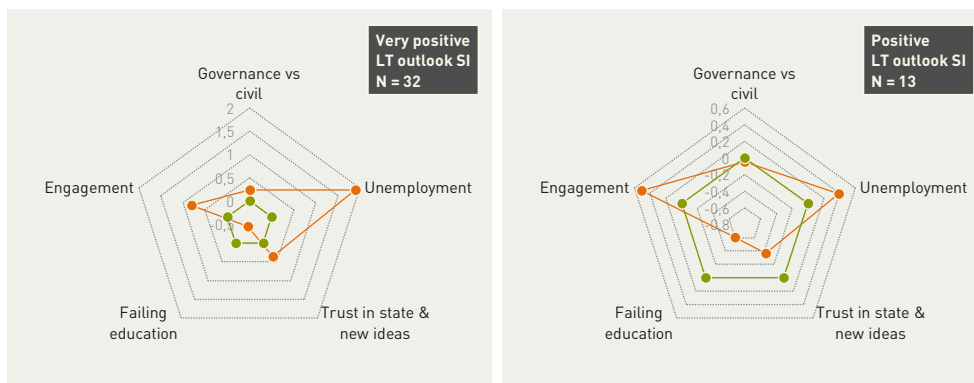
Figure 38. Average macro SI profiles for selected cases by theme of SI



Note: The average factor scores for all EU regions in the database is zero, as reflected by the green-line. The orange line represents the average for the SI cases with a particular theme in a specific region. This orange line therefore represents a sub-sample as we do not have results for SI cases in every EU region.

From these regional SI profiles, we can also conclude that on average the SIMPACT cases of SI are selected from regions which have on average a higher rate of unemployment than the average EU region. In addition, the factor engagement seems higher than the EU regional average. SIs with a very positive long-term outlook are especially to be found in regions, with even higher scores on the factor ‘Unemployment’, but also in regions which have a relative high score on ‘Trust in state & new ideas’. Furthermore, they have a low score on ‘Failing education’.

Figure 39. Macro SI profiles for selected cases by long-term outlook of the SI

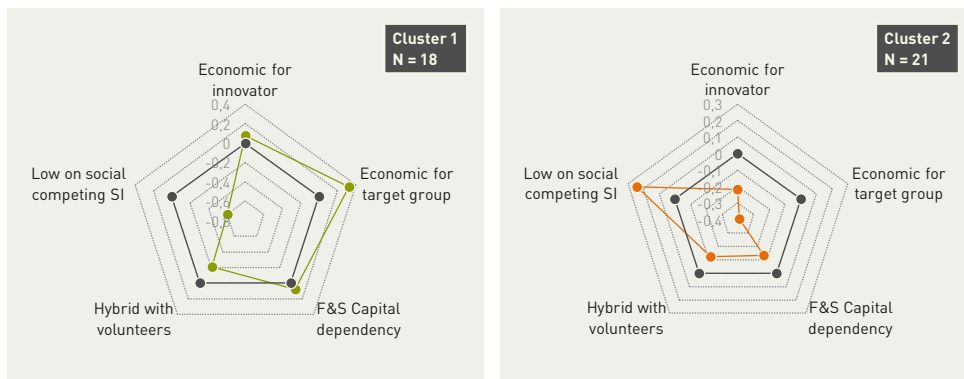


Note: The average factor scores for all EU regions in the database is zero, as reflected by the green-line. The orange line represents the average for the SI cases with a particular theme in a specific region.

## 8.6 Micro-SI-Profiles per Type of regional SI Profile

The number of SI cases per type of region are quite small for cluster 4 and cluster 3. Concerning the micro-profiles of SI per type of region we therefore limit ourselves to the comparison between the type of Cluster 1 (green) and Cluster 2 type of regions (orange) (see Figure 40).

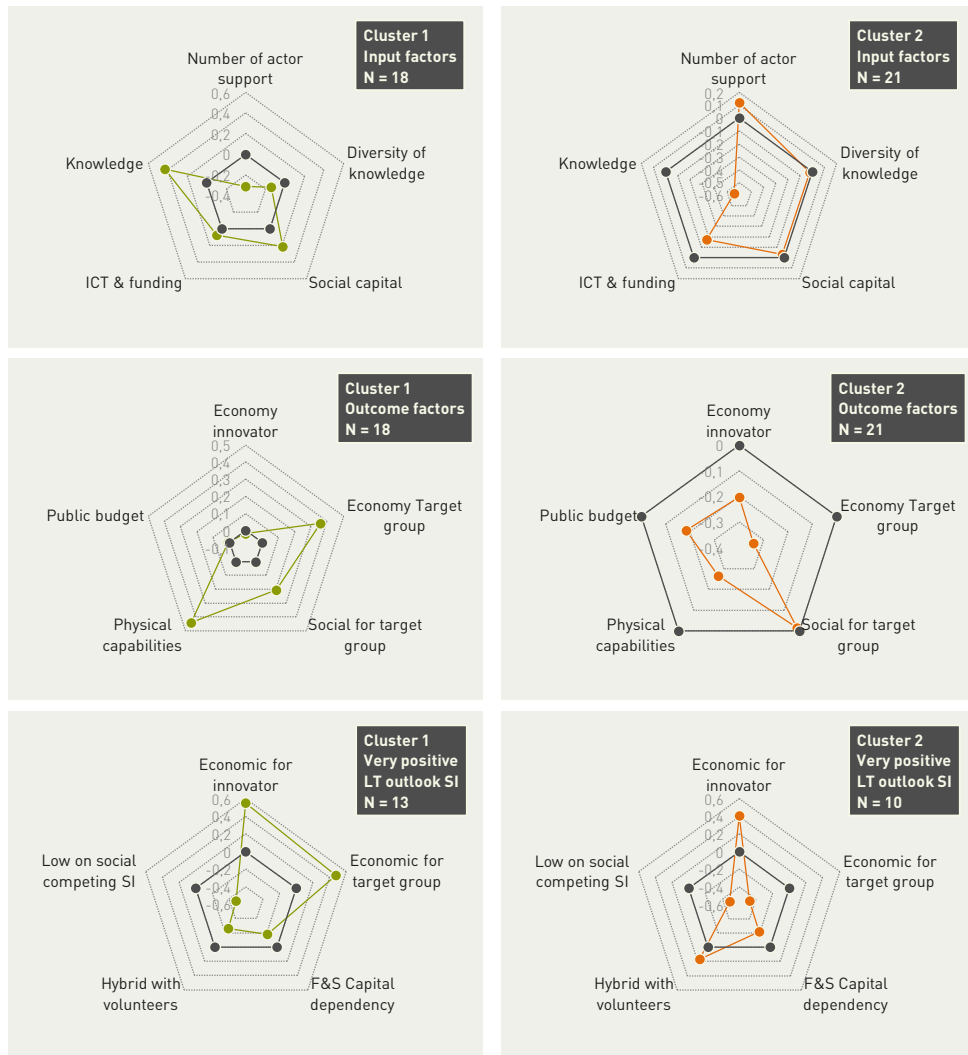
Figure 40. Micro SI profile per type of region



The micro profiles show major differences. In Cluster 1 there are on average less SIs which are 'low on social', so their social relevance is high. Also in terms of economic impact for the target group their performance is on average higher. In Cluster 2, the SIs have on average lower rated economic benefits for the target group. The cases in type 2 regions often have low social impact scores on issues such as life-skills of the marginalised (as indicated by a high score on the factor 'Low on social, competing SI').

In Figure 41 we present the micro input profiles, and output profiles of the SIs in both cluster 1 and cluster 2 type of regions.

Figure 41. Micro input, output, and full SI profile for cases per type of region



## 9 CONCLUSIONS

We conclude that SI has many aspects, and is an even broader societal concept than other forms of innovation, such as the more traditional technological, and for-profit innovations. Besides a conceptual broadening, also the metrics and measurement approaches need to incorporate a broader perspective, by specifically including the public sector, the social or third sector, and the private sector, since SI deals about the new combinations of resources and capabilities from these sectors. A broad range of resources and capabilities of these different sectors serve as input to the SIs. In addition, the objectives, and the benefits and impacts from the SIs differ for each of these three sectors. Measuring SI therefore involves capturing these aspects for the various sectors. For measuring SI or the measurement of its economic impacts, it is not enough to limit the indicators to only one or two of these three economic sectors.

We can conclude that the value or impact of SIs derive from the interaction between the supply and demand for SIs. Therefore, indicator sets need to include both indicators for the demand, or for the needs for SIs, as well as indicators for the potential to supply solutions. The interaction between the demand and supply-side of SI as the economic underpinning of SI is not mediated by prices on markets for exchange value. As with other kinds of innovations the producers and users of innovations have to engage in interactive learning, which involves communicating tacit knowledge and discussions of intangibles and use value among collaborating partners.

Regarding the measurement of SI at micro level it is relevant to capture various inputs, outputs, objectives and obstacles. The importance of certain inputs differs by for instance the type of main funder, the theme of SI, and the scale of operations. SIs at local scale have on average a lower number of actors and cooperation, and a lower degree of diversity of knowledge than SIs which operate at national level. These two input-factors (a large number of actors and partners, and diversity of knowledge) are also characteristic for the SIs which have a very positive long-term perspective.

ICT seem a more important source of input for SI in the theme 'Demographics and Education', than for SIs in the theme 'Employment'. ICT investments seem also more common among SIs which are implemented at national scale (compared to those implemented at local scale). On the other hand, for SI in the theme 'Employment', knowledge is a relatively important input.

Supply & demand for SIs determine value/impact

Measurement at micro level

ICT as important input for SI

It is difficult for innovators to combine in one SI the two objectives of seizing business opportunities and increasing public values which do not benefit the marginalised target group directly (e.g.: social cohesion, inclusion, lobbying).

The co-rated importance of organisational and legal obstacles confirms the importance of the hybrid issue for social innovators concerning the problem to find the appropriate legal form of organisation for their activities.

The concentration of social, financial and political obstacles for certain SIs seems to serve as an identification of radical SIs.

**Divers economic outcomes**

Several types of economic output can be identified: economic outcomes for the innovator, economic outcomes for the target group, and benefits in terms of public budget. Other social benefits cannot directly, be translated into economic benefits, or it would take a much longer time to materialise.

**Local SI show higher impacts for target groups**

SIs which are implemented at local scale have a high economic impact for the target group and the public budget, but the impacts for the innovator are relatively small compared to SIs which are implemented at national level. SIs implemented at national scale have on average less impact on public budget and lower rated economic impacts for the target group, but the business economic impacts for the innovators are rated higher.

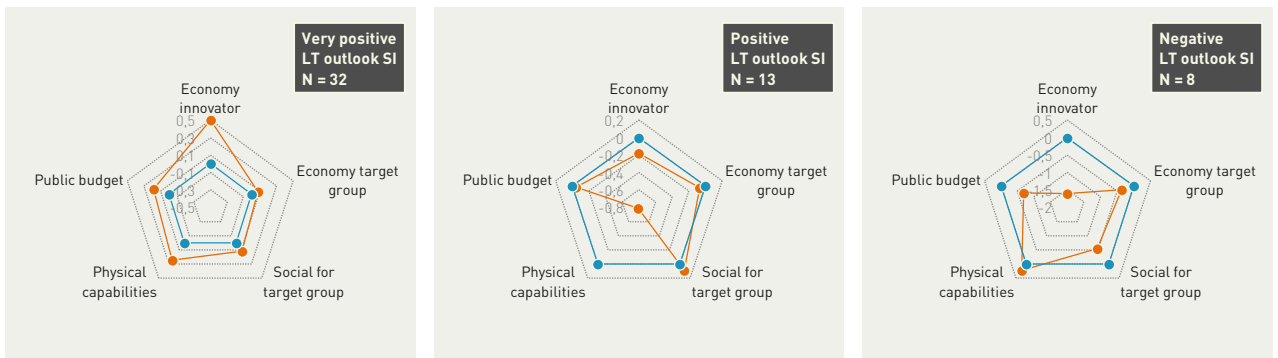
SIs in the theme of Employment are characterised by on average high economic impacts for the target group.

**Product/service SI have high impacts for innovators**

SIs that are product/service innovations do well on the economic impacts for the innovators. SIs which involve addressing a new target group do very well on all impact fields, except economic impacts for the innovator. In order to improve their long term perspective, policy makers should therefore invest in the business capabilities of these social innovators (without applying further output related objectives concerning benefits for the marginalised target group).

**Complementing impacts from empowering innovator & target groups**

SIs that have a very positive long-term perspective, have above average scores on impacts for the innovator, but also for social as well as economic benefits for the target group. The more general policy implication is that policy makers, who want to increase the long-term economic impact from social innovation, should not merely focus on output in terms of empowerment of the marginalised target group, but should also invest in the empowerment and long-term perspective of the social innovators.



Based on a large set of regional statistics with relevance to SI, we can conclude that the regional situation concerning SI differs within Europe, and not all differences can be reduced to differences between countries.

The identified regional SI factors are both related to differences in regional GDP as well as regional Human Development Index, an index which can be seen as an output indicator to measure the impact of SI beyond GDP.

Four different types of SI regions (or regional eco-systems) within the EU are identified. The first group or cluster of regions with similar SI characteristics, are characterised by the high score on the SI factor, which we have labelled 'Failing education'. The second group of regions are characterised by high scores on the SI factors: 'Governance vs. civil', and 'Engagement'.

4 types of regional SI ecosystems

The SIMPACT cases in the first type of region do well on economic impact for the target group. The SIMPACT cases in the second type of region have rather disappointing impacts for the target group. Knowledge is a more important input factor for the SIMPACT cases in the first type of region, compared to those in the second type of regions.

SIMPACT SIs with a very positive long-term outlook are especially to be found in regions, which have high scores on the SI factor 'unemployment', and where life-long-learning type of SIs seems to serve the marginalised target groups as well as their regional economies.

## REFERENCES

- Alkire, S., Sawar, M.B. (2009). Multidimensional Measures of Poverty & Well-being. Working Paper. Oxford Poverty & Human Development Initiative (OPHI), Oxford Dept of International Development. Oxford University. Available online at: [http://ec.europa.eu/regional\\_policy/archive/policy/future/pdf/7\\_alkire\\_final\\_formatted.pdf](http://ec.europa.eu/regional_policy/archive/policy/future/pdf/7_alkire_final_formatted.pdf)
- Angier-Griffin.com (2009). Measuring Social Value. An Overview. Available online at: <http://www.angier-griffin.com/downloads/2009/feb/measuring-social-value-an-overview.pdf>
- Anheier, H. K., Krlev, G., Preuss, S., Mildenerger, G., and Einarsson, T. (2014). Theory and empirical capturing of the third sector at the macro level. Deliverable 2.1 of the project: 'Impact of the Third sector as Social Innovation' (ITSSOIN), European Commission – 7th Framework Programme, Brussels: European Commission, DG Research.
- Armitage, E., C. Béné, A.T. Charles, D. Johnson, and E.H. Allison (2012). The Interplay of Well-being and Resilience in Applying a Social-Ecological Perspective, *Ecology and Society*, 17(4): 15. <http://dx.doi.org/10.5751/ES-04940-170415>
- Becker, H.A. (2001). Social impact assessment. *European Journal of Operational Research*, Volume, 128(2): 311–321.
- Benneworth, P. (2013). The role of universities in contributing to social innovation. In: 6th International Barcelona Conference on Higher Education, Barcelona, Spain, 13-15 May 2013.
- Benneworth, P. and Cunha, J. (2015). Universities' contributions to social innovation: reflections in theory & practice. *European Journal of Innovation Management*, 18 (4). 500–527.
- Boundchek, M. and Choudary, S.P. (2013). The Age of Social Products. *Harvard Business Review*. Available at: <https://hbr.org/2013/10/the-age-of-social-products>
- Caulier-Grice, J. Davies, A. Patrick, R. and Norman, W. (2012). Defining Social Innovation. A deliverable of the project: "The theoretical, empirical and policy foundations for building social innovation in Europe" (TEPSIE), European Commission –7th Framework Programme, Brussels: European Commission, DG Research.
- Corrado, C. (2012) OECD-MIT workshop presentation, National Academy of Sciences, Dec. 3, 2012; Available at: [http://sites.nationalacademies.org/cs/groups/pgasite/documents/webpage/pga\\_080787.pdf](http://sites.nationalacademies.org/cs/groups/pgasite/documents/webpage/pga_080787.pdf)
- Corrado C., J. Haskel, and C. Jona-Lasinio (2015). Public Intangibles: The Public Sector and Economic Growth in the SNA. SPINTAN on Smart Public Intangibles, *Working Paper Series* No.1
- Corrado, C., C. R. Hulten, and D. E. Sichel (2006). Intangible Capital and Economic Growth. NBER Working Paper No. 11948
- Creswell, J. , and Plano Clark, V. (2007). *Designing and conducting mixed methods research*. Thousand Oaks: Sage
- De Haan, A. (2015). *Social inclusion and structural transformation: Concepts, measurements and trade-offs*. UNU-MERIT Working Paper #2015-045. Background paper for the UNIDO, Industrial Development Report 2016: IDR 2016 WP 9



- Dunnewijk, T., H. Hollanders and R. Wintjes (2008), Benchmarking Regions in the Enlarged Europe: Diversity in Knowledge Potential and Policy Options. In C. Nauwelaers and R. Wintjes (eds.), *Innovation Policy in Europe*, Edward Elgar: Cheltenham, 53-106.
- European Commission (2004). Aid Delivery Methods. Volume 1: Project Cycle Management Guidelines. Brussels: European Commission. Available online at: [http://ec.europa.eu/europeaid/sites/devco/files/methodology-aid-delivery-methods-project-cycle-management-200403\\_en\\_2.pdf](http://ec.europa.eu/europeaid/sites/devco/files/methodology-aid-delivery-methods-project-cycle-management-200403_en_2.pdf)
- European Commission (2015a) The Programming Period 2014-2020 - Guidance Document on Monitoring and Evaluation - Concepts and Recommendations. Brussels: EC.
- European Commission (2015b) Indicators for promoting and monitoring Responsible Research and Innovation. Report from the Expert Group on Policy Indicators for Responsible Research and Innovation. Directorate-General for Research and Innovation. EC, Brussels.
- European Commission (2015c) Consumer Scoreboard. Online available: [http://ec.europa.eu/consumers/consumer\\_evidence/consumer\\_scoreboards/10\\_edition/index\\_en.htm](http://ec.europa.eu/consumers/consumer_evidence/consumer_scoreboards/10_edition/index_en.htm)
- Dosi, G. (1982). Technological paradigms and technological trajectories: A suggested interpretation of the determinants and directions of technical change. *Research Policy*, 11(3): 147-162.
- Ettorre, D., N. Bellantuono, B. Scozzi, and P. Pontrandolfo. (2013). Towards a new definition of social innovation. Proceedings of IFKAD. Zagreb, Croatia, 12-14 June 2013.
- Fagerberg, J. (2013) Innovation; A new guide. *TIK Working Papers on Innovation Studies*, No. 20131119. University of Oslo. Available at: <http://ideas.repec.org/s/tik/inowpp.html>
- Fagerberg, J. (2014) Schumpeter and the revival of evolutionary economics: an appraisal of the literature. *Journal of Evolutionary Economics*, 13(2), p. 125-159
- Fine, B. (1989). *Marx's Capital*, Houndmills: Palgrave Macmillan.
- Fleetwood, S. (1997) Aristotle in the 21st century. *Cambridge Journal of Economics*, 21(6): 729-744.
- Frenz, M. and R. Lambert (2012). Mixed Modes of Innovation: An Empiric Approach to Capturing Firms' Innovation Behaviour. *OECD Science, Technology and Industry Working Papers*, 2012/06, OECD Publishing. <http://dx.doi.org/10.1787/5k8x6l0bp3bp-en>
- GECES Sub-group on Impact Measurement (2013). Proposed Approaches to Social Impact Measurement in the European Commission Legislation and Practice Relating to: EuSEFs and the EaSI. Brussels. Available online at: [http://ec.europa.eu/internal\\_market/social\\_business/docs/expert-group/20131128-impact-measurement-sub-group\\_en.pdf](http://ec.europa.eu/internal_market/social_business/docs/expert-group/20131128-impact-measurement-sub-group_en.pdf)
- Hall, P. and D. Soskice (eds.)(2001). *Varieties of Capitalism. The Institutional Foundations of Comparative Advantage*. Oxford: Oxford University Press.
- Haskel, J., and C. Edlin (ed.) (2010). COINVEST Final Report. Available at: [http://cordis.europa.eu/publication/rcn/13505\\_en.html](http://cordis.europa.eu/publication/rcn/13505_en.html)
- Heiskala R (2007). Social innovations: structural and power perspectives. In: Hamalainen TJ, and Heiskala R (eds), *Social innovations, institutional change and economic performance*. Edward Elgar, Cheltenham, 52-79.
- Houghton Budd, C, C.W.M. Naastepad, and C. P. van Beers (Eds.) (2015). Report Contrasting CRESSI's Approach of Social Innovation with that of Neoclassical Economics. CRESSI Working Papers No. 12/2015

- Howaldt, J., Butzin, A., Domanski, D., and Kaletka, C. (2014). Theoretical Approaches to Social Innovation - A Critical Literature Review. A deliverable of the project: 'Social Innovation: Driving Force of Social Change' (SI-DRIVE). Dortmund: Sozialforschungsstelle.
- Hubrich, D.-K., Schmitz, B., Mildenerger, G., and Bund, E. (2012). The Measurement of Social Economies in Europe - a First Step towards an Understanding of Social Innovation. A Deliverable of the Project: "The Theoretical, Empirical and Policy Foundations for Building Social Innovation in Europe" (TEPSIE), European Commission – 7th Framework Programme, Brussels: European Commission, DG Research
- Jepson, P. (2005). Governance and accountability of environmental NGOs. *Environmental Science & Policy*, 8(5): 515–524.
- Kramer, M. and M. Porter (2011). Creating Shared Value". *Harvard Business Review*, 89(1/2): 62-77.
- Krlev, G., Bund, E., and Mildenerger, G. (2014). Measuring What Matters: Indicators of Social Innovativeness on the National Level. *Information Systems Management*, 31(3): 200–224.
- Lachenmaier, S. and H., Rottmann (2010). Effects of innovation on employment: A dynamic panel analysis. *International Journal of Industrial Organization*, 29(2), 210-220.
- Lundvall, B. A., ed. (1992). *National Systems of Innovation: Towards a Theory of Innovation and Interactive Learning*. London: Pinter.
- Le Ber, M.J., and Branzei, O. (2010). (Re)forming strategic cross-sector partnerships: Relational processes of social innovation. *Business & Society*, 49(1): 140-172.
- Mazzucato, M. (2013a). *The Entrepreneurial State – Debunking Public vs. Private Sector Myths*, Anthem Press.
- Mazzucato, M. (2013b). Financing innovation: Creative destruction vs. destructive creation. *Industrial and Corporate Change*, 22(4): 851-867.
- Michaelson, J., Mahony, S., Schifferes, J. (2012). *Measuring Well-being A guide for practitioners*. London: The New Economics Foundation (nef). Available online at: [http://www.socialauditnetwork.org.uk/files/3013/4996/6900/Measuring\\_well-being\\_handbook\\_FINAL\\_-\\_010812.pdf](http://www.socialauditnetwork.org.uk/files/3013/4996/6900/Measuring_well-being_handbook_FINAL_-_010812.pdf)
- Mieg, H., and K. Töpfer (2013). *Institutional and Social Innovation for Sustainable Urban Development*. London: Routledge
- Moulaert F. and Sekia F. (2003). Territorial Innovation Models: A Critical Survey. *Regional Studies*, 37(3): 289-302.
- Mulgan, G. (2010). Measuring Social Value. *Stanford Social Innovation Review*, 8(3): 38-43.
- Mullainathan S. and E. Shafir (2013). *Scarcity: Why Having Too Little Means So Much*. Time Books, New York
- Mumford, M.D. (2002). Social innovation: Ten cases from Benjamin Franklin. *Creativity Research Journal*, 14(2): 253-266.
- Nardo, M. & Michela Saisana (2005). OECD/JRC Handbook on constructing composite indicators: Methodology and User Guide. *OECD Statistics, Working Papers 2005/3*, OECD Publishing.
- Nelson, R. R. and S. G. Winter (1982). *An Evolutionary Theory of Economic Change*. Cambridge, Massachusetts: The Belknap Press.
- Nicholls, A. (2008). Capturing the Performance of the Socially Entrepreneurial Organisation (SEO): An Organisational Legitimacy Approach. In: Robinson, J., Mair, J., and Hockerts, K. (eds), *International Perspectives on Social Entrepreneurship Research*, Houndmills: Palgrave MacMillan.

- Nicholls, A. (2009). We do good things, don't we?: Blended Value Accounting in social entrepreneurship, *Accounting, Organizations and Society*, 34(6-7): 755-769.
- Nicholls, A., and D. Edmiston (2015). CRESSI's approach to social innovation: lessons for Europe 2020. Policy Brief Deliverable 1.4. *CRESSI Working Papers*, No. 13/2015.
- Nicholls J., Lawlor, E., Neitzert, E., and Goodspeed, T. (2012). A Guide to Social Return on Investment. 2nd Ed. London. SROI Network. Available online at [http://socialvalueuk.org/publications/publications/doc\\_download/241-a-guide-to-social-return-on-investment-2012](http://socialvalueuk.org/publications/publications/doc_download/241-a-guide-to-social-return-on-investment-2012)
- OECD (1994). *Proposed Standard Practice for Surveys of Research and Experimental Development, "Frascati Manual"*, The Measurement of Scientific and Technological Activities Series, OECD: Paris.
- OECD (1997). *Proposed Guidelines for Collecting and Interpreting Technological Innovation Data, "Oslo Manual"*, OECD: Paris.
- OECD (2013). OECD Guidelines on Measuring Subjective Well-being, OECD Publishing. Available online at: <http://www.oecd.org/statistics/Guidelines%20on%20Measuring%20Subjective%20Well-being.pdf>
- OECD (2015). Social Impact Investment: Building the Evidence Base, OECD Publishing, Paris. <http://dx.doi.org/10.1787/9789264233430-en>
- Osterwalder, A., and Pigneur, Y. (2010). *Business Model Generation: A Handbook for Visionaries, Game Changers and Challengers*. John Wiley & Sons.
- Pavitt K. (1984). Sectoral Patterns of Technical Change - Towards a Taxonomy and a Theory. *Research Policy*, 13:343-373.
- Penrose, E. (1959). *The Theory of the Growth of the Firm*. New York, John Wiley and Sons.
- Perrini, F., Vurro, C., and Costanzo, L.A. (2010). A process-based view of social entrepreneurship: From opportunity identification to scaling-up social change in the case of San Patrignano. *Entrepreneurship & Regional Development*, 22(6): 515-534.
- Piekkola, H. (Ed.)(2011). Intangible Capital; Driver of Growth in Europe. Proceedings University of Vaasa. Reports 167. University of Vaasa. Available at: [http://www.innodrive.org/attachments/File/Intangible\\_Capital\\_Driver\\_of\\_Growth\\_in\\_Europe\\_Piekkola%28ed%29.pdf](http://www.innodrive.org/attachments/File/Intangible_Capital_Driver_of_Growth_in_Europe_Piekkola%28ed%29.pdf)
- Pol, E., and Ville, S. (2008). Social innovation: Buzz Word or Enduring Term? University of Wollongong - School of Economics, Working Paper 08-09, June 2008. Available online at: <https://www.uow.edu.au/content/groups/public/@web/@commerce/@econ/documents/doc/uow044939.pdf>
- Pol, E. & Ville, S. (2009). Social innovation: buzz word or enduring term?. *The Journal of Socio-Economics*, 38(6): 878-885.
- Polanyi, K. (1944). *The Great Transformation*. New York: Farrar & Rinehart
- Pouw, N. & A. McGregor. (2014). An economics of wellbeing: what would economics look like if it were focussed on human wellbeing? *IDS Working Paper 436*. Amsterdam Institute for Social Science Research (AISSR).
- Radicic, D., Pugh, G., Hollanders, H., Wintjes, R., & Fairburn, J. (2015). The impact of innovation support programs on small and medium enterprises innovation in traditional manufacturing industries: An evaluation for seven European Union regions. *Environment and Planning C: Government and Policy*, 23: 279-294.
- Rehfeld, D., Terstriep, J., Welschhoff, J. & Alijani, S. (2015). Comparative Report on Social Innovation Framework. Deliverable D1.1 of the project «Boosting the Impact of Social

Innovation in Europe through Economic Underpinnings» (SIMPACT), European Commission –7<sup>th</sup> Framework Programme, Brussels: European Commission, DG Research and Innovation.

- Santos, F.M. (2012). A Positive Theory of Social Entrepreneurship. *Journal of Business Ethics* (2012) 111:335–351.
- Schumpeter, J.A. (1912), *The Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest and the Business Cycle*, (2008) translated from the German by Redvers Opie, New Brunswick and London: Transaction Publishers.
- Schumpeter, J. A. (1937) “Preface to the Japanese Edition of “Theorie der Wirtschaftlichen Entwicklung,” reprinted in Schumpeter, J. A. (1989) *Essays on Entrepreneurs, Innovations, Business Cycles and the Evolutions of Capitalism*, R. V. Clemence (ed.), New Brunswick NJ: Transaction Publishers, 165-168.
- Smith, A. (2000). *The Wealth of Nations (1776)*. New York: The Modern Library.
- Social Reporting Standard (2014). *Social Reporting Standard*; Creative Commons BY-ND 3.0. Available at: [www.social-reporting-standard.de](http://www.social-reporting-standard.de)
- Srholec, M., and B. Verspagen (2012). The Voyage of the Beagle into innovation: explorations on heterogeneity, selection, and sectors. *Industrial and Corporate Change*, 21(5): 1221-1253.
- Standing, Guy (2011). *The Precariat*. London: Bloomsbury Academic.
- Stiglitz, J.E.; Sen, A. and Fitoussi, J-P. (2009). Measuring Economic Performance and Social Progress., Paris: Report by the Commission on the Measurement of Economic Performance and Social Progress.
- Storper, M. (2011). Why do regions develop and change? The challenge for geography and economics. *Journal of Economic Geography* 11 (2011): 333–346.
- Soete, L., Verspagen, B. and ter Weel, B. (2009). System of innovation. *UNU-MERIT Working Paper Series*, 2009-062, Maastricht: UNU-MERIT.
- Castro Spila, J., Luna Á. and Unceta, A. (2016). Social Innovation Regimes: An Exploratory Framework to measure Social Innovation. *SIMPACT Working Paper*, 2016(1), Gelsenkirchen: Institute for Work and Technology. Available online: [http://simpact-project.eu/publications/wp/WP\\_2016-01\\_CastroSpila\\_Luna\\_Unceta\\_SIRegimes.pdf](http://simpact-project.eu/publications/wp/WP_2016-01_CastroSpila_Luna_Unceta_SIRegimes.pdf)
- Swedberg, R. (1994). Markets as social structures. In: *The Handbook of Economic Sociology*, 1994: 255-282.
- Tashakkori, A. and Teddlie, C. (2003). *Handbook of Mixed Methods in Social and Behavioral Research*. Thousand Oaks: Sage.
- Teece, D., and G. Pisano. (1994). The Dynamic Capabilities of Firms: An Introduction. *Industrial and Corporate Change*, 3(3): 537-556.
- Terstriep, J., Kleverbeck, M., Deserti, A. & Rizzo, F. (2015). Comparative report on social innovation across Europe. Deliverable D3.2 of the project "Boosting the impact of SI in Europe through economic underpinnings" (SIMPACT), European Commission - 7th Framework Programme, Brussels: European Commission, DG Research & Innovation.
- Totterdill, P., Cressey, P., Exton, R., Terstriep, J. (2015). Stimulating, Resourcing and Sustaining Social Innovation. Towards a New Mode of Public Policy Production and Implementation. *SIMPACT Working Paper*, 2015(3), Gelsenkirchen: Institute for Work and Technology.
- Türkeli, S. and R. Wintjes (2014). Towards the societal system of innovation: The case of metropolitan areas in Europe. *UNU-MERIT Working Paper Series*, 2014-040, Maastricht: UNU-MERIT.

- Tylecote, A. and F. Visintin (2008). *Corporate Governance, Finance, and the Technological Advantage of Nations*. Routledge: London.
- Vanclay, F., Esteves, A.M., Aucamp, I. and Franks, D. (2015). *Social Impact Assessment: Guidance for assessing and managing the social impacts of projects*. Fargo: International Association for Impact Assessment.
- Vargo, S. L. and Lisch, R. F. (2004). Evolving to a new dominant logic for marketing. *Journal of Marketing*, 68(January): 1–17.
- Vargo, S.L., P. Maglio & M. Akaka (2008). On value and value co-creation: A service systems and service logic perspective. *European Management Journal*, 26(3): 145-152.
- von Jacobi, N., Chiappero-Martinetti, E., Giroletti, T., Maestriperi, L., Ceravolo, F. (2015). D3.5: Toolkit (Methodology). CRESSI Working Papers No. 16/2015.
- Wood, C., and Leighton, D. (2010). Measuring Social Value. The Gap between Policy and Practice. London: Demos. Available online at: [http://www.demos.co.uk/files/Measuring\\_social\\_value\\_-\\_web.pdf](http://www.demos.co.uk/files/Measuring_social_value_-_web.pdf)
- Wintjes, R. and H. Hollanders (2010). Regional impact of technological change in 2020; Synthesis Report. DG Regional Policy, European Commission, Brussels.
- Wintjes, René and Hugo Hollanders (2011). Innovation pathways and policy challenges at the regional level: smart specialization. *UNU-MERIT Working Papers Series*, 2011-027. UNU-MERIT, Maastricht.
- Wintjes, R., D. Douglas, J. Fairburn, H. Hollanders and G. Pugh (2014). Beyond product innovation; improving innovation policy support for SMEs in traditional industries". *UNU-MERIT Working Papers Series*, 2014-32. [http://www.merit.unu.edu/publications/working-papers/?year\\_id=2014](http://www.merit.unu.edu/publications/working-papers/?year_id=2014)
- Wintjes, René (Editor: Federico Biagi) (2016, forthcoming). Systems and Modes of ICT Innovation. EURIPIDIS report for the European Commission. JRC IPTS, Seville. Available at: <http://is.jrc.ec.europa.eu/pages/ISG/EURIPIDIS/EURIPIDIS.index.html>
- Young, H.P. (2011). The Dynamics of Social Innovation. *Proceedings of the National Academy of Sciences of the United States of America (PNAS)*, vol. 108, supplement 4, pp. 21285–21291. Available online at: [http://www.pnas.org/content/108/Supplement\\_4/21285.full.pdf](http://www.pnas.org/content/108/Supplement_4/21285.full.pdf)

This page is intentionally left blank.

# APPENDIX

Table a Multidimensional conception of capital, power, marginalisation, SI, and capabilities in CRESSI ('integrating Sen, Beckett & Mann')

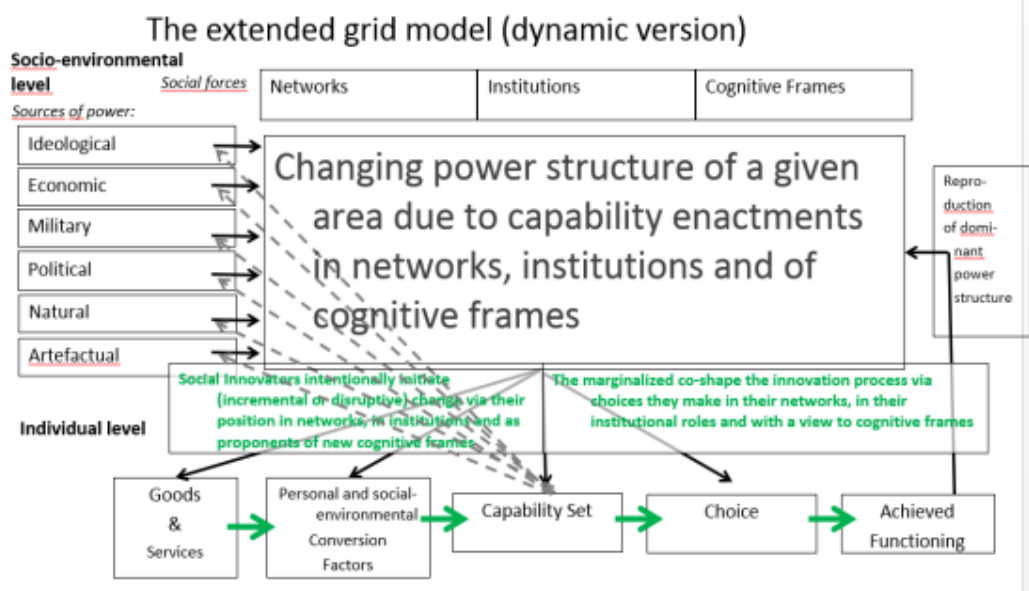
Sources of Power <sup>2</sup>	Kinds of		
	Marginalisation (1)	Social innovation (2)	Capabilities (3)
1. Cultural (Ideological)	Cm	Ci	Cc
2. Economic	Em	Ei	Ec
3. Security-related (Military)	Sm	Si	Sc
4. Political	Pm	Pi	Pc
5. Artefactual	Am	Ai	Ac
6. Natural	Nm		Nc

(1) Based on: Risto Heiskala (2014). Relation Mann's conception to CRESSI

(2) Note that this matrix is based on RH's *elaboration* of Mann's *The Sources of Social Power*. Mann distinguished four sources of social power: RH adds two sources (natural and artefactual) while remaining the two others ('ideological becoming 'cultural' and military becoming 'security-related')

Source: Houghton Budd et al. (2015: 8)

Figure a CRESSI's extended social grid model and social innovation



Source: Houghton Budd et al. (2015)

## SIB (Social Innovation Biographies) Guiding Questions (Checklist)

### Introductory Question

Please describe the innovation process from the emergence of the first idea to the implementation/diffusion of the solution including the actors involved, milestones and pitfalls in this process.

#### I. Context & Framework Conditions

What is context and policy framework in which the SI emerged?

#### II. Problem addressed

What particular problem, need or demand is addressed by the SI?

What is the idea/opportunity behind the development of the SI?

And where did it come from?

In case it came from outside: What was needed to adapt it to the context?

#### III. Motivation & Core Solution

Who initiated the SI?

What was the initiators' motivation and background?

Of what type is the SI: new products/services, organisations, or a new method or their provision, new skills, competences, resources?

To which degree is the SI bound to a specific target group?

Does the SI have a specific geographical delimitation (community, city, region etc.)?

In how far is the SI in conflict with the given institutional setting?

#### IV. Resources & Business Strategy

What are the key features of the organisation that are driving/promoting the SI (informal or legal status, people occupied, day of foundation or duration of the project)?

What resources (economic capital, social capital, political support and so on) had been needed to bring the activity/project into life?

To what extent and in which way did the resource based change in the course of the innovation process?



- Is there a strategy to sustain and optimise the flow of resources?
- What resources are needed but are not/difficult to achieve?
- What kind of knowledge and competencies was given at the beginning of the innovation process and what was missing? How the gap was filled?
- How is the activity/project internally organised? Is there a division of labour? Do trade-offs between engagement and effectiveness exist?
- Which sectors (division of labour) are involved and what were/are their roles (ideation, implementation, financing)?

**V. The Network – Governance, Support & Obstacles**

- Which actors (individuals and/or organisations) were involved and what are their roles and objectives in the SI process?
- Is there any cooperation with other projects? Are they similar or do they follow other, but complementing aims? If yes, how does it work (role of communication media, platforms of exchange)?
- Are there political links or does the necessity exist to bring the innovation to the fore of the political attention?
- To what extent was the activity/project a result of perceived failures or absence of related public policy measures?
- What are the social networks that are important to secure the resources?
- What have been the most important supporters/opponents?
- Was the project confronted with institutional boundaries (e.g. financing), or other boundaries such as law, political obstacles or missing societal acceptance? How was it dealt with?

**VI. Results: Outcomes & Impact**

- What kind of value (including economic, social and other forms of improvement of the situation) is generated by the SI? Who is the beneficiary?
- What must be given (results) to make the activity/project successful?
- What are the realised and expected outcomes (intended as well as unintended)?
- What has been done/is planned to disseminate or scale the approach?
- Is there interest in imitators/followers? Do you work on it in an active way?
- Did media play any role in the birth or spread of the SI?

How is the activity/project internally organised? Is there a division of labour?  
Do trade-offs between engagement and effectiveness exist?

## VII. Measurement

What is the estimated contribution/investment done by different stakeholders  
(Euro equivalent)?

What is the average budget per beneficiary, and what are the main cost items  
on which the budget is spend?

What is the estimated average value generated after participation in the social  
innovation for the beneficiaries and for other stakeholders?

What is the estimated long-term value creation (after 5 years) for the various  
stakeholders and society at large?

**Textbox 1. Four examples of social innovations. full case studies are available at the SIM-PACT website**

**Mothers of Rotterdam** is a recent project of Bureau Frontlijn, a non-profit Dutch organisation set up by the local government in Rotterdam to provide support to pregnant women in poor neighbourhoods. The basic idea is to first reduce the high stress experienced by the pregnant woman, by initially solving some of their most urgent problems for them, and subsequently, by teaching them new life skills. At the same time, the project supports the children from before birth up until four years, by which time the children start school, and can join another project of Bureau Frontlijn. The help and support is achieved with a group of students paying frequent visits to the families. Bureau Frontlijn and Mothers of Rotterdam have been successful partly because of the cooperation between students and social and medical care professionals, and because of their fairly radical approach to helping the mothers and their children in need.

**Granny's Finest** is a social enterprise set up (originally as a foundation) in 2011 by two Dutch students, who saw an opportunity for creating a new kind of a business, and ended up helping elderly, and often lonely people in the Netherlands. Apart from the central office in Rotterdam, the main part of the organisation consists of knitting clubs managed by volunteers in several Dutch cities where 'grannies' (people, mainly women, over the age of 55) can get together and knit fashion products, such as scarves and hats from high quality wool to be sold online and in certain shops. The idea is that the people get together socially, and therefore reduce their loneliness, and feel useful and proud by making the fine, marketable products. The buyers can even send an included feedback card to the grannies. Co-funding is provided by local care providers who want to get in touch with their future clients. Meanwhile, the activities improve the wellbeing of the grannies, reducing their need for more formal care services. The fashion products are designed by young graduate designers, creating them opportunities for positive exposure in their early careers.

**VoorleesExpress** is an already well-established project of SodaProducties set up in 2006 and developed by Anne and Marieke Heinsbroek in Utrecht. SodaProducties is a foundation organised originally around the VoorleesExpress project, which supports young children (between 2 and 8 years) with difficulties in their Dutch language skills, as well as the parents of these children. Volunteers visit the families on a regular basis for half a year, read with the children, and try to get the parents to take over the reading responsibility by engaging them in the activity. Tackling language problems early, well before they negatively affect further educational and job opportunities, as well as general life management, is supported by literature as an effective approach.

**WORK4ALL** is a local public procurement with social return project set up in Roermond (The Netherlands) with the purpose of tackling fairly high levels of youth unemployment and reliance on welfare support. WORK4ALL involves companies hiring unemployed youth on a temporary basis for construction work. In addition to a small monthly payment, the young people are offered a simultaneous training program in civil engineering, and the hope is that they get further employment after the initial phase, get off social benefits,

become more independent, and stay away from criminal activities. A responsibility for taking on these people (as a proportion of all those employed in a project) is incorporated in the public procurement calls for tenders that the municipalities write for their civil engineering projects. After some initial problems due to too much top-down planning and enforcement, the program has been tailored to the needs of all the stakeholders involved: the construction companies, the main target group of unemployed youth, the training



**Westphalian  
University**

**IAT**  
Institute for Work & Technology



technische universität  
dortmund



**sinnergiak**  
social  
innovation  
ehu group

**VŠEM**

**NEOMA**  
BUSINESS SCHOOL



**POLITECNICO  
DI MILANO**



Maastricht University  
**UNU-MERIT**

**TNO**



UNIVERSITY OF  
**BATH**



**NORDREGIO**  
Nordic Centre for Spatial Development



UNIVERSITY OF  
EASTERN FINLAND