

## A GLOBAL MAPPING OF SOCIAL INNOVATIONS:

### Challenges of a Theory Driven Methodology

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#### KEY WORDS

*Social Innovation  
Theory Development  
Mixed Methods Methodology  
Mapping*

#### ABSTRACT

*The article discusses and analyses challenges, constraints and prospects of a theory driven empirical research methodology in the thematic field of Social Innovation. Based on the experiences made while conducting a global mapping of social innovation initiatives, it reflects challenges such as the different understandings and definitions of the research field and contexts related to different policy and world regions. Starting with the approach of the EU funded international project SI-DRIVE, the challenges of theory development and its methodological operationalisation and limitations in an iterative improvement by sequential empirical mappings are discussed - combining quantitative and qualitative research and results for proving and elaborating the theoretical frame (building blocks of a Social Innovation Theory). Empirical evidence shows that the theoretical development of such a ubiquitous phenomenon needs an iterative interrelation of theory and empiricism and a multi-method approach, giving leeway for the whole variety of social innovations by simultaneously developing a common understanding and concept of Social Innovation.*

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## 1. Introduction

The verification or falsification of theoretical hypotheses through empirical data is part of almost every methodological handbook of social sciences, including the discussion of its general capabilities, limitations and constraints. This article will focus on the experiences made in sequential theory development based on empirical evidence in an iterative way – mutually improving theory and empiricism. The subject dealt with is Social Innovation, a research topic which has drawn considerable attention in recent years, but which is at the same time characterised by different theoretical approaches and various conceptual understandings. Therefore, in the first chapter the conceptual background to advance the concept of Social Innovation by theoretical building blocks will be revealed. In the second chapter the methodological operationalisation of a consecutive theory development is reflecting the described research background and its confrontation with several methodological challenges. Third, the interrelation between theory development and empirical analysis is exemplified by the experiences of the EU funded large scale

research project SI-DRIVE “Social Innovation: Driving Force of Social Change” ([www.si-drive.eu](http://www.si-drive.eu)). The article will conclude with the advantages, limitations and constraints encountered throughout the research process, reviewing and reflecting the chosen solutions.

## 2. Social Innovation – Different Approaches, Increasing Conceptual Clarity

Social Innovation is a ubiquitous phenomenon. It is increasingly discussed and promoted in all world regions (see e.g. Howaldt et al. 2016), and although the status of social innovation activities and initiatives is varying, there is a growing awareness of the topic in all parts of the world, both in academia and practice. The Europe 2020 Strategy as well as its specific Flagship Initiatives (esp. Innovation Union) clearly stipulates the importance of Social Innovation to successfully cope with societal challenges. Similar to the European Commission (EC), many governments of European Member States, other states of the world (e.g. Australia, Canada, China, Colombia, New Zealand, and the USA) and UN organisations acknowledge Social Innovation as essential for the innovation policy of the future.

That being said, the field of Social Innovation is also characterised by a plurality of concepts and understandings. In recent years, the research community has been confronted with the challenge to theoretically understand and empirically describe the diversity of the subject. Temporarily, the focus on social entrepreneurship and even its equalization with Social Innovation excluded other key aspects and the potential of a more comprehensive concept of Social Innovation and its relationship to social change (Howaldt, Kaletka, and Schröder 2016).<sup>1</sup>

Against the background of complex and increasing societal challenges (e.g. economic crises, demographic change, environmental stress, education and lifelong learning, unemployment, social exclusion, poverty), the contribution of social innovations to systemic or transformative change (see e.g. Howaldt and Schwarz 2016, Avelino and Wittmayer 2014) has become more and more relevant in recent years. But as Jenson and Harrison already stated, a sound and accepted theoretical framework for Social Innovation was still missing only a few years ago: “Although social innovations pop up in many areas and policies and in many disguises, and social innovation is researched from a number of theoretical and methodological angles, the conditions under which social innovations develop, flourish and sustain and finally lead to societal change are not yet fully understood both in political and academic circles” (European Commission 2013: 7).

This reflection served as a starting point for the project SI-DRIVE and its ambition to develop a sound theoretical framework for Social Innovation which is supported by empirical evidence.

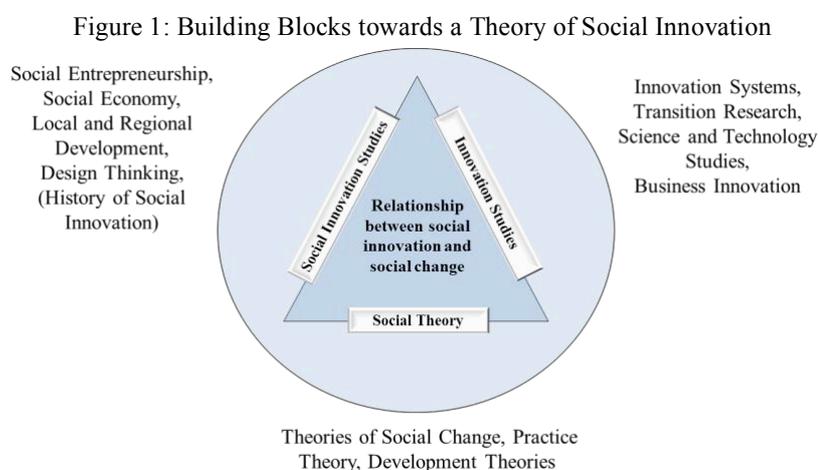
The main challenge is to elaborate a theory of Social Innovation by integrating existing theories and research methodologies to advance understanding of Social Innovation on the one hand, and to develop a methodology to verify and further develop the new theoretical framework based on empirical evidence.

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<sup>1</sup> “What is needed is a differentiated perspective of the role of social entrepreneurs within the different phases of the social innovation process and the cross-sector collaboration with actors from the different societal sectors (private, public, universities, and civil society).” (Howaldt, Kaletka, and Schröder, 2016: 95).

As Mulgan (2012) and others have outlined, there are many theoretical foundations which can help to conceptualise the field of Social Innovation for the purpose described above. Starting point for the development of such a theoretical framework was a review of existing theories relevant for Social Innovation. Within SI-DRIVE (Howaldt et al 2014, p.2ff) Social Theory, Innovation Studies and Social Innovation Studies form the three building blocks (including its main approaches) for developing (building blocks of) a Social Innovation Theory and for research on the relationship of Social Innovation to social change (see figure 1).

Based on this critical literature review of existing theories, Howaldt et al. (2016) developed a theoretical framework for the empirical mapping of social innovations, building on a comprehensive definition of Social Innovation and practice fields clustering similar initiatives, five key dimensions and mechanisms of social change.



The definition of Social Innovation employed is focusing on “a new combination or new configuration of social practices in certain areas of action or social contexts, prompted by certain actors or constellations of actors in an intentional targeted manner with the goal of better satisfying or answering needs and problems than is possible on the basis of established practices; at the end socially accepted and diffused (partly or widely) throughout society or in certain societal sub-areas, and finally established and institutionalised as social practices. [...] This working definition also foresees that, depending on circumstances of social change, interests, policies and power, successfully implemented social innovations may be transformed, established in a wider societal context and ultimately institutionalised as regular social practice or made routine” (Howaldt et al., 2016: 4f).

Based on this definition, the empirical work was differentiating between the macro level of policy fields and the micro and meso level levels of “practice fields” and related “projects/initiatives”:

- “practice field” is a general type or “summary” of projects and expresses general characteristics common to different projects (e.g. micro-credit systems, car sharing)
- “project/initiative” is a single and concrete implementation of a solution to respond to social demands, societal challenges or systemic change (e.g. Muhammed Yunus’ Grameen Bank which lends micro-credits to poor farmers for improving their economic condition, different car sharing projects or activities at the regional-local level).

Main theoretical frame for mapping and analysing social innovation cases is the operationalisation of the comprehensive definition of Social Innovation through five key dimensions. This means, the review and mapping of social innovation practices:

- have to describe concepts and understanding (analytical concept: social practice)
- are based on and addressed to social demands, societal challenges (and systemic changes, if feasible)
- will depict resources, capabilities and constraints including capacity building, empowerment and conflict
- refer to governance, net-working and actors (functions, roles and sectors) for social change and development
- document the different phases of the process dynamics (mainly mechanisms of diffusion: imitation, social learning; relationship to social change).

In a fourth perspective the processes of social innovations are characterised by mechanisms of social change (Howaldt and Schwarz, 2016: 59f, based on Wilterdink, 2014): learning, variation, selection, conflict, competition, cooperation, tension and adaption, diffusion, planning and institutionalisation of change. To illustrate some of these mechanisms, *learning* is, for instance, illustrating the mechanisms of cumulative knowledge improvement, capacity building and empowerment: within mutual learning processes social innovators and other actors of the initiatives realise mistakes, apply new ideas and engage in processes of learning, leading to tacit and codified new knowledge (Cowan, David, and Foray, 2000). *Selection* incorporates processes of adoption, diffusion and imitation, but also processes of decline and death of initiatives. *Institutionalisation* could be a planned or unplanned or even an unintended process, in congruence or in difference with existing institutions, interfered by unforeseen events.

### 3. Methodological Approach: Challenges and Solutions

Against this background a methodology has to be chosen that takes into account the verification and further development of the described theoretical framework by empirical evidence. Traditionally, there are two starting points for empirical research: (1) an explorative and more qualitative approach to develop a framework of a new theory. Therefore, a positivistic quantitative approach is less probable, given the fact that there is no consistent empirical base or established tradition to build upon. Focusing on a classificatory and investigative approach, qualitative methods can be utilised and hence, adapted to improve theoretical concepts as in qualitative comparative analyses. (2) To test and establish a theoretical framework representative surveys and quantitative methods are chosen to verify the indicated hypotheses. In addition, (3) cyclic development approaches between theory and empirical results can be of a benefit to better understand Social Innovation. “To achieve this, careful consideration of a number of key research principles is required in order to build a better understanding of social innovation practices in various contexts, relating practice to policies and social change, utilising a multidisciplinary approach, strengthening the analytical tools, maintaining a cyclic iteration process throughout, and focusing on advancing social innovation for theory and practice.” (El-Haddadeh et al. 2014: 250)

Another relevant methodological approach for social innovation research is the mapping of initiatives. Coming from geography and cartography the term “mapping” is used in social sciences more and more for data gathering and graphical (special, content related) analyses and presentations in the sense of giving an overview over concepts, contents, and processes. Also within the geography science community a broader definition of “mapping” than just a spatial cartography

is appearing (cf. Ball and Petsimeris 2010). Within the last years, mapping approaches have been also implemented by a number of social innovation projects. Pelka and Terstriep (2016) identified 17 European projects using different types of mapping which focus on thematic aspects like citizen engagement (TEPSIE) or economic underpinnings (SIMPACT), management frameworks (CASI) and incubation approaches (BENISI), the identification of innovative service practices (INNOSERVE), the public (LIPSE) or the third sector (CRESSI, TSI, ITSSOIN). Empirical analyses of successful local or regional models of Social Innovation (CRISES / Moulaert 2012, WILCO – Welfare Innovations at the Local level in favour of Cohesion) have also made important contributions to a better understanding of the topic by highlighting aspects like empowerment and collective action.

Based on the comprehensive view on Social Innovation described above SI-DRIVE has taken a more wide-ranging approach than the examples given above. The project has sampled and analysed a set of more than 1,000 social innovation initiatives from all over the world. These cases have originated from all societal sectors and represent different thematic fields of Social Innovation (Howaldt et al. 2016). To overcome the limitations of a case study approach, SI-DRIVE's iterative theory development is based on subsequent empirical phases *mapping* the world of Social Innovation by combining quantitative and qualitative methods.

The key elements of Social Innovation (definition, practice field approach, key dimensions, and mechanisms of social change) described in the first chapter form the background for the methodological operationalisation. To develop a theory of Social Innovation, the elaborated theoretical approach and its building blocks have to be checked against empirical evidence. An interrelated methodological approach has to take explicitly care of the huge variety of understanding and manifestations of social innovation activities. This leads to at least four methodological challenges, of which the first two challenges can be associated to core methodological discourses in social sciences:

1. The operationalisation of theoretical hypotheses or frameworks into an empirical sound measurement, *interrelation of theory and empiricism*
2. Overcoming the *limited outrange* of using only quantitative or qualitative methods to get a sound and wide-ranging depiction of social innovations worldwide
3. Taking into account *different understandings* of the subject of investigation (Social Innovation as a ubiquitous concept)
4. And last but not least, the *unknown* main unit or basic population.

These four main challenges will be described now in detail by integrating sound solutions that were taken up by the methodological approach of SI-DRIVE (see next chapter).

#### *Ad 1) Combining and interrelating theory and empiricism*

Operationalising the developed theoretical framework to empirical tools reflecting both the hypothetical frame and the practical implementations of social innovations is one of the main challenges (not only for social innovation research but for social sciences as such). In order to develop a theory-led and inspired common understanding of Social Innovation, a *cyclical approach* in form of an *iteration loop* is essential. In this loop, the theoretical concept is repeatedly improved after subsequent empirical examination/verification. Accordingly, the theoretical framework is building the *deductive* ground and structure for the empirical research on the one hand. But on the other hand, significant parts of establishing an integrated theory of Social Innovation are delivered through *inductive* appraisal and improvement of empirically obtained data. Therefore, this approach

clearly distinguishes from pure deductive scientific procedures, where empirical research and practice is informed by existing theories only in a top-down manner – and on the other side it differs as well from more practice related approaches, lacking a sound theoretically based concept and framework.

*Ad 2) Combining quantitative and qualitative methods*

With regard to the research framework and the methodological challenges described, it is evident that a quantitative analysis can only provide initial evidence for some key dimensions, e.g. questions regarding the process dynamics of Social Innovation and the impact achieved. Conclusions can be drawn on the general motives and the ambitions of the initiatives' actors. But as far as societal impact or social change is concerned, this question will be more precisely answered by qualitative research like in-depth case studies which do not only take a single initiative into account (micro level) but also reflect on the *practice field* (meso level) the initiative is operating in, the processes and dynamics, the critical success factors and intended or accomplished mechanisms leading to social change.

Following El-Haddadeh et al. (2014: 255) “the data collection approach should adapt a mixed method approach consisting of quantitative (survey) and qualitative (interview and observation) techniques” leading to a triangulation and combination of quantitative and qualitative methods and their results which also has a sequential advantage. Therefore, the quantitative part serves as a starting point and provides a generic overview with regard to the variety and different types of social innovation initiatives. These results can then improve the theoretical frame and build a new ground for further examination with qualitative methods. In a second step, case studies can be drafted and analysed. These follow-up case studies can then serve a purpose very different from the examples given by Pelka and Terstriep (2016): the quantitative basis built before helps to cluster and combine the cases. A case is not only a singular case but, on two other aggregated levels, an element of a practice field and an even wider policy field. A case can then be analysed not only as a standalone example, but its embeddedness in a wider framework of actors, initiatives and motives can be described from a triangulated perspective. This delivers in-depth information for the further interpretation of the quantitative data and theoretical concept. This kind of methodology is also open for what is defined and understood as Social Innovation in the world (see ad 3 below), integrating different meanings and approaches of Social Innovation, not excluding and segregating any existing approach and giving leeway for additional structural elements that are not covered by the existing concept.

*Ad 3) Different understandings of the subject of investigation*

The development of a Social Innovation Theory has to consider a long-lasting approximation of the understanding of what Social Innovation is about. If a theory of Social Innovation as such is the objective, a comprehensive and overarching *definition of Social Innovation* is required which is open to different kinds of social innovation initiatives. Based on such a common ground, social innovation experts can then select and interpret cases on the basis of their understanding and the practical implementation in their given context (sector, culture, region, policy field, etc.). This approach is incorporating the diversity and plurality of concepts and understandings, objectives, sectors and actors and their diverse roles within a social innovation process across different contextual geographical and policy frameworks and conditions. The balancing act between an orientation which is too weak due to a highly comprehensive definition on the one side and a strictly normative determination on the other side is bridged by the described theoretical building blocks (practice field definition, key dimensions and mechanisms of social

change) and their operationalisation as orientation and defining the scope of social innovation initiatives.

*Ad 4) Unknown main unit or basic population*

Due to the diversity of social innovation and especially the fact that, up to now, there has been no sufficient large-scale quantitative database, every empirical research on Social Innovation remains *explorative* and is not representative in a statistical way. Even a comprehensive mapping of Social Innovation in its broad variety and diversity is not leading to *statistically* representative empirical results because of the missing commonly accepted definition and typology and the resulting lack of information on dimensions of the main unit, as mentioned above. The methodological combination of quantitative data with qualitative reviews and their triangulation is therefore the most promising way to prove the reliability and validity of the quantitative data (esp. by the following in-depth case studies). Empirical research based on the *openness* for diverse understandings and concepts of Social Innovation (based on the definition of Social Innovation) has to have an *explorative* character. But to establish a common framework of understanding the mapping, the description and the analysis of cases and initiatives have to follow strictly the theoretical structure. This is particularly important as dimensions, indicators and variables set a new frame across the different understandings of Social Innovation - leading to a new perspective on existing social initiatives.

#### 4. Methodological Lessons Learned

The implications of the described concept of Social Innovation and its methodological challenges are core of the theoretical development of SI-DRIVE. SI-DRIVE's research for developing (building blocks of) a Social Innovation Theory is aiming at a comprehensive and systematic analysis of the diverse conceptions of Social Innovation, focusing on the main societal challenges reflected by different policy fields and regional contexts mapping social innovations all over the world. Against this background, SI-DRIVE has decided to conduct an explorative survey and develop an inventory of a growing and diversified area, reflecting its broadness and usability, understanding the variety of actors and their interaction and exploring the systemic character of the concept.

The consortium tried to meet these demands with a methodological approach which can be characterized by four decisions made based on the methodological challenges and solutions described before:

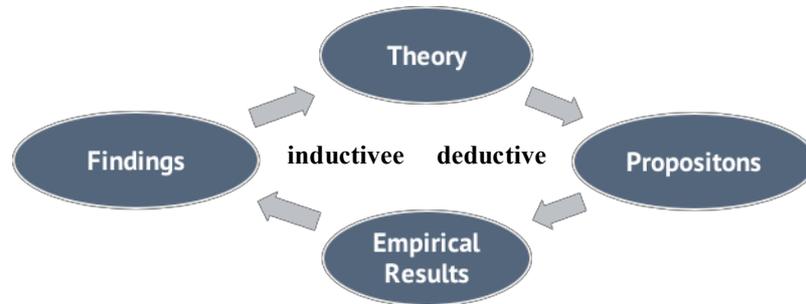
- (1) using an iterative and cyclical approach allowing to improve theory after each empirical phase;
- (2) triangulating qualitative and quantitative research;
- (3) defining a comprehensive frame for expert-based case selections, thereby giving leeway for unknown phenomena and emerging topics;
- (4) taking the unknown main unit and basic population into account.

*Ad 1) cyclical approach and iteration loops leading to empirical based theory development*

A combination of deductive and inductive elements has proven useful within the iterative framework, also because it helped to utilize the different competences and to harmonise the different perspectives of the researchers involved. The SI-DRIVE methodology is *deductive* in the sense that a sound theoretical framework is building the ground and structure for the empirical

research (mapping phases) but as well *inductive* by improving the existing theoretical framework through empirical evidence (see figure 2).

Figure 2: Iterative Process of SI-DRIVE



According to e.g. Saunders et al. (2007) the inductive approach is used to collect data and develop a theory as a result of the data analysis, the deductive approach is used to develop a theory, and then design a research strategy for testing that theory. SI-DRIVE is integrating both perspectives: combining deductive and inductive research is enabling cross-validation and refinement of the research propositions of the theoretical framework (see research foci related to the key dimensions of SI-DRIVE in Butzin et al. 2014).

SI-DRIVE's *cyclical approach* in the form of a double *iteration loop* is continuously improving theory, methodology and policy after two empirical stages. It helps to verify and further develop the theoretical framework and can contribute to a more and more *common* understanding of Social Innovation also in the large and global consortium of the project. This has proven to be an excellent basis for working together on theory, empirical key results and policy recommendations. In detail, a first theoretical and methodological as well as a first policy and foresight exercise provided the ground for the contents and methods of the first empirical phase (global mapping). The empirical results were used for the improvement of these three pillars, and for the definition of the second empirical phase: the in-depth case studies (second empirical phase): In particular, quantitative results were used to develop hypotheses of the upcoming qualitative empirical phase. Based on the empirical outcomes of the first mapping results, the second phase delivered additional data for the quantitative results and specific topics. Contextual insights were deepened especially in areas such as success factors, social innovation processes, actor constellations and mechanisms of social change. Both empirical phases have contributed correspondingly to the final theory, methodology and policy and foresight recommendations of SI-DRIVE.

*Ad 2: Combining quantitative and qualitative results leading to a sound (new) reflection of the variety of Social Innovation*

To prove and improve the theoretical framework, SI-DRIVE has chosen multiple empirical methods to overcome the limits of both quantitative and qualitative methods. Already in the first empirical phase (the global mapping), a mixture of research activities (document analysis, desk research, online survey, database screening) was conducted, and the quantitative global mapping was enriched by non-standardised open questions allowing to reflect different contexts and understandings of Social Innovation.

While the first empirical phase was mainly based on a *quantitative* survey (see ad 1), the second one improved the results by selected in-depth case studies (*qualitative* approach), chosen from the global mapping and representing the variety of initiatives of the main practice fields in the

policy fields. This combination helped to overcome the constraints of each of these methodologies: while quantitative surveys and database analyses are leading to a quantifiable picture based on a numerable amount of cases they mainly lack of context related interpretation; qualitative methods are mainly done by case studies analysing the context of a phenomena, but often confronted with the limited outreach because of single cases. For instance, Myers (1997) and Mingers (2001) argue that although most researchers conduct either qualitative or quantitative research, some researchers recommend to combine them in one study. Furthermore, Stake (1995) notes that qualitative research seeks to understand the interrelation of the phenomenon at stake, whereas quantitative researchers are keen on finding the explanations and controlling the phenomenon. Das (1983, cited in Amaratunga et al. 2002: 23) argues that “qualitative and quantitative methodologies are not antithetic or divergent; rather they focus on the different dimensions of the same phenomenon”. Therefore, the mixed research of SI-DRIVE is a synthesis that overcomes the limitations and combines the advantages of both qualitative and quantitative research. By combining the benefits of both sides, a generalized overview on the one hand and a deepened understanding of the phenomenon on the other hand, the consortium was able to describe the outlines of a yet uncharted topic.

*Ad 3) Clear definition giving leeway for different (geographical and policy) specifications and phenomena*

One of the main objectives of SI DRIVE was to clarify what is meant by Social Innovation and to develop a consistent typology of Social Innovation. Therefore, it was decided that the selection of the social innovation cases should be very *open within a given structure*: Social innovation initiatives were selected by the experts involved in SI-DRIVE from the perspective of their regions, including what is defined and seen as Social Innovation in their global regions or countries. That means that by a given survey template (based on the theoretical framework so far: comprehensive definition of Social Innovation and mainly structured by the key dimensions, practice and policy fields, being open for additional themes than the predefined ones) the regional partners and experts of the SI-DRIVE consortium collected and described social innovation cases of their areas within the given theoretical structure.

During the empirical work the experts had to “rethink” their chosen initiatives against the background of the given theoretical framework. The open approach does not mean that everything could be collected. By the given common structure the cases have to fulfil the given requirements to be comparable across world regions and policy fields. Across the different understandings the experts had to map and analyse every case consistent to the framework. This was a challenging exercise, because the experts had to abstract from their own conceptual view and investigate the cases from a new perspective. However, this methodology enabled the project to integrate a wide range of social innovation cases, especially those that were not named as social innovation before. In the end it has to be stressed that this led to a new theory driven understanding of Social Innovation and an almost characteristic picture of the world of Social Innovation.

*Ad 4) Explorative reflection of the broad variety and understanding of Social Innovation*

The quantitative mapping of 1,005 social innovation cases in the first empirical phase was supplemented by policy field related state of the art reports (desk work) and policy and foresight workshops as well as a trend study of Social Innovation in major world regions (beneath Europe including Australia/New Zealand, Western and South-East Asia, North and South Africa, North and South America, Russia). Thus, SI-DRIVE is reflecting both: geographical areas and policy fields -

incorporating the diversity and plurality of concepts and understanding, objectives and actors and their diverse roles within a social innovation process.

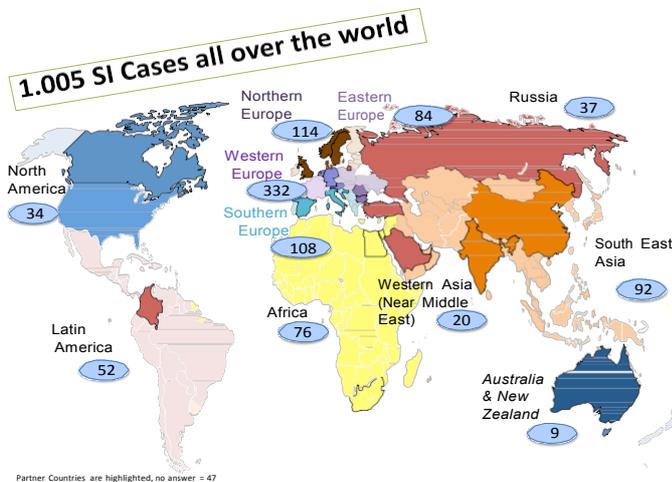


Figure 3: Worldwide Mapping of Social Innovation

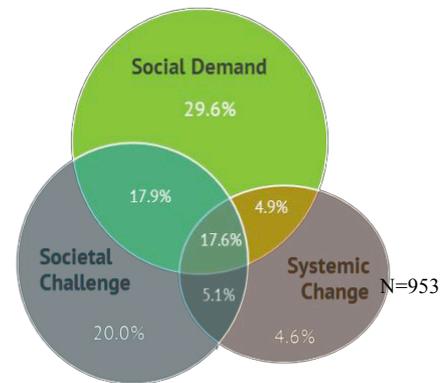


Figure 4: Societal Levels Approached

Against the background of an *unknown main unit or basic population*, this mapping has to be seen as an *explorative* (not statistically representative) inventory of a growing and varying area exploring the systemic character and concept of Social Innovation. However, for the first time in social innovation research, a global picture of this phenomenon is giving quantifiable evidence of the status of social innovation initiatives. For instance, based on the differentiation of the BEPA report (BEPA 2010) a clear majority of all initiatives mapped for SI-DRIVE was found to meet a concrete social demand (71%) and/or tackle a societal challenge (60%), whereas one of three (32%) try to achieve systemic change. But as figure 4 shows, most of the initiatives do not address one societal level alone but rather different combinations, with a strong focus on specific social needs in most of the policy fields (except for environment and climate change as well as energy supply which both have a stronger orientation towards overarching societal challenges). This cross-cutting character of Social Innovation is also underlined by its cross-policy implementation of solutions: most of the initiatives are related to more than one policy field combining for instance employment and education for comprehensive solutions for the beneficiaries. The policy field of poverty reduction could be seen as a cross-cutting policy field itself, showing holistic oriented solutions by specific combinations with all other policy fields (Howaldt et al. 2016: 8).

From the qualitative research of the in-depth case studies a more dynamic picture of social innovation processes is showing the advantage of a multi method approach. For instance, the mechanism of social change can be described as such (mainly relevant for strong formally regulated policy fields like education, health and employment): *conflict and tension* can be considered the main starting points driving social innovations - often closely related to the formal system, its gaps and failure. This tension can lead to *cooperation* – which is considered a success factor – not only influencing *variation* and *selection* but further highly relevant for *diffusion* (across regions) and *institutionalisation* (institutionalisation, however, is very much related to the given formal environment and has to be recognized as an option rather than a necessity). *Competition* among social innovation initiatives is not of an issue; instead it is related to public funding and awareness. As such, *diffusion* is not considered a success factor by most of the initiatives; rather it pinpoints to the development stage of a single social innovation and is closely related to institutionalisation. It was noted that a social innovation must reach a certain level of critical mass that would push the

social innovation into the direction of diffusion and institutionalisation. However, some of the social innovations do not intend to become institutionalised which reveals the tension that may exist between the social innovation and the given structures, e.g. financial dependencies vs. the role an initiative assumes for itself within formal or structural boundaries of existing systems.

## 5. Conclusions: Advantages and Disadvantages, Limitations

Developing a theory for such a ubiquitous yet diversified phenomenon like Social Innovation with different understandings and appearances needs a suitable methodological approach. This article is illustrating one way of how methodological challenges of such a challenging theory development can be solved:

1. The operationalisation of theoretical hypotheses or frameworks into an empirical sound measurement, *interrelation of theory and empiricism*
  - Solution: cyclical approach, iteration loops leading to a common understanding
2. The *limited outrange* of using only quantitative or qualitative methods
  - Solution: combining quantitative and qualitative methods
3. *Different understandings* of the subject of investigation (Social Innovation as a ubiquitous concept)
  - Solution: overarching but clear definition of Social Innovation, giving leeway to different policy and geographical/cultural contexts
4. The unknown main unit or basic population
  - Solution: explorative reflection of the broad understanding of Social Innovation, selection of cases by the involved experts, continuous harmonization of different perspectives

The solutions of all these four challenges are interrelated and complementing each other, oriented at exploring the broad understanding and the concept of Social Innovation (Howaldt/Schwarz 2010) within its implementation in the empirical research of SI-DRIVE.

*Advantages* of the described methodology are lying in the iterative improvement and verification loops of theory development based on empirical foundation and clarification. The theoretical building blocks (comprehensive definition, practice fields construct, key dimensions and mechanisms of social change) are setting a sound ground for the empirical examination and validation. The combination of quantitative results with qualitative enhancements (from different sources such as state-of-the art reviews and in-depth case studies) is avoiding the disadvantages of each single method and is improving the reliability and validity of the results to a high degree.

*Limitations* are lying in the research subject itself: the unknown main unit and basic population. In this respect it has to be acknowledged that in SI-DRIVE a case was defined as a relevant social innovation (project or initiative and related social practice field) by the experts of the involved global regions (project partners, advisory board members) based on the guidelines and instructions provided. Despite the fact that a case had to correspond to the definition, the mapping may be biased due to the experts' understanding of Social Innovation, their knowledge and the dependence of publicly available information on social innovation cases. However, the given framework (critical literature review, questionnaire) and the obtained qualitative research activities (state-of-the art reviews, policy field and regional reviews) together with the methodological instruction led to a *common* comprehensive understanding and view on the world of Social Innovation.

Another limitation can be found in the explorative character of the methodology, not leading to statistical representativity. In literature on statistical methodology, sound knowledge on statistical dimensions of the basic population and its borders is considered a key quality criterion for empirical social research (e.g. Tachtsoglou and König 2007), especially when it comes to representative random samples. Although the underlying theoretical framework and its cyclical and iterative approach is going further than previous social innovation research, and although for first time a wide-ranging quantitative basis of social innovation cases all over the world was collected, the main unit or basic population is still not commonly defined nor registered. However, von der Lippe and Kladroba (2002) point out that genuine random samples are difficult to achieve in general. Moreover, even if random samples are realized, genuine representativeness can hardly be achieved. This leads to a similar situation between a random sample building on a clearly determinable population and a random sample building on a population that is unclear in its size and statistic. This is also and especially the case with explorative samples that are not random as they are not representative by design.

However, due to the ongoing and rapid development and the high variety of social innovation activities it is doubtful if a statistically representative research is feasible and desirable. Neither a complete inventory of the whole population nor statistical representative samples seem to be feasible yet.<sup>2</sup> The basic population in its outreach may remain statistically unknown because of the constant changes of the initiatives (not persons are the main unit but initiatives / projects). It would be helpful to set up a (European, national, regional) database which should be continuously improved, not only for research but also for the exchanging of good practice, ideas etc.

The mapping of cases in SI-DRIVE did not build on a random sample but on an explorative approach. Although it is based on a sample defined by a theoretical frame and the understanding of the involved experts of Social Innovation, first explorative empirical findings on characteristics of Social Innovation around the world were possible, not making any claim to representativeness. However, the value of sound information on a tested population shall not be questioned here. Hence, further research could use the explorative quantitative findings in order to enrich knowledge on the population of Social Innovations around the world, providing a foundation for more representativeness.

In summary, the results of SI-DRIVE can be seen as one comprehensive and triangulated approach which sets the ground for further research and methodology development. The special accomplishment is the scoping exercise, a broad overview with selective deepened insights moving towards a representative picture of the phenomenon which may be completed by other researchers at a later stage.

Accordingly, the *Atlas of Innovation* (see <http://www.socialinnovationatlas.net>), published in January 2018, does not present a complete global picture of Social Innovation, but compiles spotlights from a regional and policy field background and will be enriched step by step by other experts of the global regions, of specific thematic fields or societal sectors. The “Atlas” is organized around the different foci of SI-DRIVE’s theoretical and empirical research: providing an overview of various types of Social Innovation in different world regions and policy fields (education and lifelong learning, employment, environment and climate change, energy supply, transport and mobility, health and social care, and poverty reduction and sustainable development) and

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<sup>2</sup> The best way to draw statistically representative conclusions for a population is to take a (random) sample of the relevant population. Therefore, you need to have a clear characteristic of the population and its societal and geographical distribution and allocation.

summarising new intelligence on the diversity of social innovation approaches in different parts of the world used by practitioners, researchers and policy makers; again, reflecting the diversity, broadness and usability of Social Innovation, demonstrating the variety of actors and their interaction and exploring the systemic character and concept of Social Innovation.

In general it has to be stated, that the findings presented in this article are first attempts far away from a common accepted theoretical and methodological approach for defining and mapping Social Innovation. But the empirical evidence show that this theoretical framework and the interrelated methodology led to a new and more comprehensive understanding of Social Innovation and new typology approaches (see Howaldt et al. 2017, Rabadjieva et al. 2017). However, the concept and methodology for Social Innovation have to be discussed in the broader Social Innovation Community (e.g. [www.siceurope.eu](http://www.siceurope.eu); [www.socialinnovationexchange.org](http://www.socialinnovationexchange.org)), contrasting different approaches. Especially the transformative social innovation theory approach of the TRANSIT project (<http://www.transitsocialinnovation.eu/>, Avelino and Wittmayer 2014) has to be taken into account focusing on a methodology to analyse transformative change on the macro level of game changers and social innovation networks (e.g. Avelino and Wittmayer 2014, Avelino et al. 2017, Haxeltine et al. 2013). Not to forget, the different articles of this EPSIR issue are a good ground for an ongoing methodology discussion and development.

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