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Social Innovation Regime: an integrated approach to measure social innovation

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ABSTRACT

This paper is focussed on the development of an exploratory integrated perspective to understand and measure Social Innovation Ecosystems through the notion of Social Innovation Regime. This concept builds upon the interrelation between socioeconomic contexts of SI (meso–macro levels) and intra/inter-organizational dynamics (micro level), where SIs are developing. That is to say, the ways in which the social economy and social organizations are connected to a broader SI Ecosystem where the socioeconomic contexts surrounding National Welfare Regime try to answer to the policy and market failures that have an impact on regional vulnerability rates. This article suggests the hypothesis that there is an interrelation between the strength of Welfare Regimes and Social Innovation Ecosystems, at a time where Social Policies and Welfare States all over the world are weakened or in crisis, opening the door to social innovation. This paper describes this connection through the notion of Social Innovation Regime, proposing an interesting exploratory framework to explore the socio-structural factors through which a country or region presents a set of vulnerabilities which can transform into unattended social problems. Finally, this analysis can contribute to the methodologies on SI measurement and impact by determining the regional vulnerability rate – social, economic, institutional, environmental – inside welfare regimes.

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SI Regime; SI Ecosystem; regional vulnerability; institutional context; social innovation; welfare regime; social economy; social organizations

1. Introduction

The development of socioeconomic indicators to measure social innovation (SI) remains a challenging task within social innovation research. Inside the academic and institutional literature available (Beers, Havas, & Chiappero-Martinetti, 2015; Dhondt et al., 2016; Krlev, Bund, & Mildenerger, 2014; Mulgan, Kippy, & Numan, 2013; Schmitz, Krlev, Mildenerger, Bund, & Hubrich, 2013; Terstriep, 2016; Unceta, Castro-Spila, & García Fronti, 2015, 2017; Westley & Antadze, 2010), we identified what we define as three major perspectives through which the development of social innovation indicators can be explored: (a) the ‘individualist approach’ which measures SI at the micro level by focussing on the actions developed by social entrepreneurs and social innovators in different countries; (b) ‘the regional/national

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approach' which measures social innovation in different institutional contexts, structures, ecosystems and/or environments and (c) 'the organizational approach' which measures social innovation activities, capabilities and skills for social innovation inside organizations. The three approaches on their own have different limitations but acknowledged together can represent a viable pathway to build an integrated framework for SI impact measurement.

This paper proposes the concept of 'Social Innovation Regime' with the purpose of developing a holistic approach to SI measurement in order to understand the inter-relationship between what we identify as 'social innovation contexts' (meso level) and 'social innovation dynamics' (micro level). The notion of 'Social Innovation Regime' relies on the works carried out around the concept of 'Welfare Regime' (Bejaminsen & Andrade, 2015; Esping-Andersen, 1990). This perspective offers an interesting framework of exploration of the structural conditions through which a region presents a set public policy and market failures in their 'welfare regimes' which give rise to a set vulnerabilities (social, institutional, economic and environmental) that can have an effect on the emergence of unattended or undetected social problems and limitations affecting vulnerable and excluded segments of the population. Thus opening the door for SI as a vehicle of empowerment and bottom-up approaches to challenge existing rules, public policies, institutional frameworks and modes of governance inside national and regional contexts (Martinelli, 2012; Terstriep, 2016; Westley & Antadze, 2010).

Following the reflections made by Flavia Martinelli (2012) and Geoff Mulgan (2016) among others (Moghadam Saman & Kaderabkova, 2015), this paper also seeks to understand how SI can be feed into the support, strengthening out and re-adaptation of Welfare States (Esping-Andersen, Gallie, Hamerijck, & Myles, 2002), by having a supporting role in the fight for social exclusion and poverty reduction through the 'growing mobilization of users' or the devolution of 'authority to local governments' (Martinelli, 2012, pp. 171–172). According to Martinelli, at a time where the privatization of public services through the application of neoliberal policies have weakened European welfare states, SI has proofed to satisfy human needs that would otherwise be ignored, to empower individuals and social groups, or change social relations (Martinelli, 2012, p. 172).

In this context, one of the major challenges inside SI is the reduction of the gap between the macro/meso and the micro perspectives of SI, to build a coherent framework that could better reflect their different relationships and interactions, thus contributing to their measurement through SI indicators. We acknowledge this is a very complex and challenging task to achieve, this paper does not solve this complexity. The purpose of this paper is to offer a possible theoretical perspective to explore these meso-micro approaches to SI from an integrated perspective.

Within these meso–macro levels (regions/nations), we propose the concept of 'regional vulnerability', which is modelled by four dimensions: (a) social vulnerability, (b) institutional vulnerability, (c) economic vulnerability and (d) environmental vulnerability. The combination of these categories would allow for the comparison of different regional contexts in relation to their vulnerability rates. The relationship between different levels of 'vulnerability' by 'welfare regime', and the assessment of the 'vulnerability' of social–environmental systems, has been widely discussed in academic literature (Eakin & Lynd Luers, 2006; Nolan & Whelan, 2011; Whelan & Maitre, 2010).

At the micro level, we propose the use of the COP model (Components, Objectives, Principles of social Innovation) defined by the SIMPACT FP7 European Project

(Rehfeld, Terstriep, Welschhoff, & Alijani, 2015), to which we have added an impact dimension in order to explore 'social innovation dynamics', thus including impact (I) inside the components, objectives and principles of SI (COPI model).

We have divided this paper into three main sections. The first section is focussed on the different approaches applied to SI measurement and their different limitations. The second explores the meaning of SI in the context of impact through the description and analysis of a new model to understand the lifecycle of SIs. Finally, the third section dives into the specific definition of the 'Social Innovation Regime' and how it connects to social innovation 'contexts' and 'dynamics'.

2. Three perspectives to measure social innovation

SI measurement and socioeconomic impact have been for a long time a required and challenging area of research inside SI studies, acknowledged by the research community, policymakers, social investment funds, practitioners, social entrepreneurs and social innovators themselves. However, there is still a lack of consensus on what are the major and determining methodological tools and indicators involved in its measurement and impact assessment.

Despite this difficult task, there are three approaches that can be identified in the academic field which seek to build a system of indicators for SI measurement: 'the individualistic approach', 'the organizational approach' and 'the regional/national approach' (Unceta et al., 2015).

2.1. The individualistic approach

Many authors have focussed on social entrepreneurship and the social economy as an important area inside SI studies (Alvord, Brown, & Letts, 2003; Ellis, 2010; Maclean, Harvey, & Gordon, 2013; Thompson, Geoff, & Ann, 2000) by identifying social entrepreneurs as social innovators (European Commission, 2013). In this context, research around SI has focussed on the SI indicators directed to the impact assessment of their actions, motivations and the ecosystems in which social entrepreneurs develop and try to scale their initiatives to answer to specific social needs (Zahra, Gedajlovic, Neubaum, Shulman, 2009). We can find examples of these practices through the analysis of case studies, and other comparative analysis at regional and territorial levels inside the Social Entrepreneurship Monitor and other European projects (European Commission, 2013; Harding, 2006; Sen, 2007).

Although this approach provides a tangible baseline to analyse specific social actions and their success within a local/regional context, it shows certain limitations when trying to measure the expected and ex-post impact of these SIs. First, from a conceptual perspective, it limits social innovation by specifically relating it to social entrepreneurial activities, not being capable of making a difference between the innovative and entrepreneurial agencies, which have different implications when considering socio-structural impact and the necessary skills and capabilities needed to develop SI inside organizations. Secondly, this first limitation leads to major challenges when we try to understand the regional and national contexts where these innovations are developed, unless we are able to relate these initiatives as an answer to specific policy failures inside public institutions or welfare models.

2.2. The organizational approach

This approach focusses on the analysis of organizations to understand and assess social innovation (Sinnergiak Social Innovation, 2013; European Commission, 2011). In this context, studies on the relevance of organizational hybridization and social innovation (NGOs, hybrid structures in companies, public sector organizations, etc.) highlight the importance of governance factors and new business models to answer to social problems (Battilana, Lee, Walker, & Dorsey, 2012; Grassl, 2012; Grohs, 2014; Pestoff, 2015). Moreover, within the organizational approach, we recognize the relevance of learning needs, skills and capabilities to develop SI inside organizations based on their absorptive capacity. For example, the pilot project RESINDEX (Regional Social Innovation Index) reflects on this idea by offering a system of indicators that helps us make an important distinction between potential and realized capacities inside different types of regional organizations (companies, universities, NGOs and research centres) by exploring the characteristics of the social innovation projects developed inside their organizational structures (Sinnergiak Social Innovation, 2013). At organizational level, the alignment of conceptual and methodological dimensions to measure social innovation provides technological indicators, which favour organizations over other units of analysis. However, the design of these indicators does not take into account the importance of the regional/local context where these SIs are developed.

2.3. The regional/national approach

Finally, this approach is concerned with the development of SI indicators at the macro-meso level, integrating data and statistics from different European sources to agree on a set of comparable indicators between countries or regions (Krlev et al., 2014). An example of this approach can be analysed inside the European project TEPSIE (Theoretical, Empirical and Policy Foundations for Building Social Innovation in Europe) which has developed a model to measure SI three different levels: framework conditions, entrepreneurial activities, and field-specific outcomes and outputs, discussing the different results obtained from this integrated approach (Krlev et al., 2014). However, this method on its own also has a series of limitations due to the fact that the use of secondary sources is based on surveys and data which are not directly related to SI initiatives. These indicators take account of the economic, social, political, cultural and technological environment in which SIs are developed but they do not focus specifically on the measurement of SI.

Given the limitations of the three approaches, reaching consensus on how to build an effective model to measure SI implies the development and empirical validation of a conceptual and methodological integrated framework, which connects the micro, meso and macro levels (Groot & Dankbaar, 2014). This would consider the importance of SI 'dynamics' (COPI model) and 'context' when assessing impact.

3. Understanding social innovation

In order to establish an integrated model to measure SI, we first have to make a clear definition of what we understand by SI. Throughout years of research, many academics

have made an effort to define and share a common understanding of what SI is, who makes it happen, under which circumstances and what kind of results can it produce (Cajaiba-Santana, 2014; Howaldt, Butzin, Domanski, & Kaletka, 2014; Klein & Harrison, 2017; Nicholls, Simon, & Gabriel, 2015; Pol & Ville, 2009; Westley & Antadze, 2010). The definition which best adjusts to the purpose of this paper is the one shared by Rehfeld et al. (2015) where they define SI as ‘a novel combination 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 innovation or as a result of it’ (Rehfeld et al., 2015, p. 6).

The definition strengthens the relationship between the institutional ‘context’ and ‘dynamics’ of SI (COPI model), as well as its focus and target population. With regard to the context and dynamics, this definition makes special emphasis on the relevance of knowledge and collaborative processes capable of generating products and practices that have a capacity to transcend the institutional contexts by overcoming barriers (social, institutional, economical and systemic) to social integration. With regard to the focus and target population towards which SI is oriented, this definition pays special attention to vulnerable social groups with the purpose of empowering and reintegrating them into acceptable socio-economic standards inside the institutional context where SI takes place. Thus SI can express an answer to local conditions of exclusion and marginalization of vulnerable groups. This degree of vulnerability may vary from one institutional context to the next. Figure 1 describes the interplay of these factors inside SI established by this operational definition.

In this scheme, the institutional context has major implications. On the one hand, the institutional context establishes the social, economic, political and environmental conditions which define a set of barriers and/or challenges for the integration of vulnerable groups. On the other hand, this institutional context may also create the drivers for social innovation by identifying a series of systemic failures which can be translated into specific solutions in the form of products, new services or new public policies. As a result, the same context can build enabling actions for a correct inclusion of these vulnerable segments of the population or empower them to take action (Castro-Spila & Unceta, 2015).

Understanding which are the drivers and barriers to social innovation allows us to focus on the ‘dynamics’ of SI, that is to say, the process of examination (experimentation and

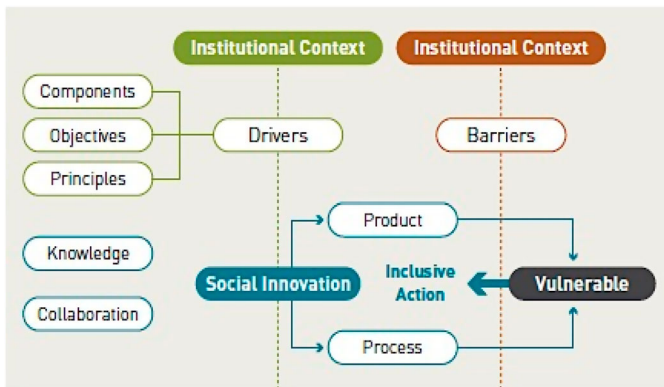


Figure 1. Social Innovation as Empowerment and (re) engaging of vulnerable groups. Source: Authors

learning), exploitation (prototyping and development), evaluation (impact measurement) and diffusion capacities (escalation and sustainability) that SI actors/agents have in order to overcome different barriers.

Within this complex relationship, there are two other important factors that come into play. The first one is 'knowledge'. SIs are the result of novel combinations of 'knowledge' to develop viable solutions to complex social problems. 'Knowledge' represents the organization's intangible asset to create the adequate processes and mechanisms of interpretation, assimilation, recombination and exploitation of both internal and external knowledge to implement SIs (Unceta et al., 2015, 2017). The second factor is influenced by collaboration and learning networks. SIs are collective processes where participation and collaborative networks play a major role in the capacities of social innovators to learn. Collaboration can be understood as the process in which two or more actors/agents share information, knowledge, and resources to face a common challenge/objective, thus resulting in organizational alliances. But collaboration can also be understood as the process and mechanism that enables the target population (vulnerable groups) to be included in the different phases of the SI lifecycle (Castro-Spila & Unceta, 2015).

3.1. Identifying vulnerability and vulnerable groups

Vulnerable groups are those who by virtue of their age, sex, race, socioeconomic or physical condition find obstacles for their integration in a certain institutional or social context being exposed to high risk of being socially excluded. The concept of vulnerability has major implications on how we manage risk at a global, national, regional or local level. Welfare models and public institutions play an important role by creating the necessary policies and mechanism to manage this risk (Birkmann, 2014; Goodin, 1985; Mechler, 2004; Mechler, Hochrainer, Linnerrooth-Bayer, & Plug, 2014; Ranci, 2010). As stated by Constanzo Ranci (2010) the concept of vulnerability was first introduced by risk analysis to explain how a certain risk factor may apply differently for 'equally exposed individuals'. Ranci defines 'vulnerability' as the identification of

a situation that is characterized by a state of weakness which exposes a person or a family to suffering particularly negative or damaging consequences if a problematic situation arises.

Vulnerability does not necessarily identify trajectories of impoverishment or social exclusion, but rather a high degree of exposure to serious damage ... (Ranci, 2010, p. 16)

As stated by Eakin and Lynd Luers (2006), 'vulnerability conveys the idea of susceptibility to damage or harm' (Eakin & Lynd Luers, 2006, p. 366). This concept has been studied from multiple perspectives and disciplines. As discussed by these authors, from risk/hazard studies or biophysical approaches, to the influence of political-ecological or political-economic frameworks. Moreover, new approaches also contemplate the concept of ecological resilience, which has also been discussed in SI studies (Eakin & Lynd Luers, 2006; Westley & Antadze, 2010). This brings about the idea that there are differential capacities to cope and adapt to different social systems or welfare regimes within these systems, which also deals with the capacities of individuals, institutions or governments to respond to change.

We can identify a series of vulnerabilities (social, institutional, economical, environmental) that we have grouped through the concept of 'regional vulnerability' (Birkmann,

2014; Eakin & Lynd Luers, 2006; Goodin, 1985; Mechler, 2004; Mechler et al., 2014; Nolan & Whelan, 2011; Ranci, 2010; Whelan & Maitre, 2010). 'Regional vulnerability' is defined by four different kinds of vulnerabilities: social vulnerability, institutional vulnerability, economic vulnerability and environmental vulnerability. For each of these dimensions of vulnerability, we suggested a set of **specific indicators** in order to operationalize its different typologies. We have made a selection of what we consider the most important ones, leaving behind other indicators that are also part of this typology.

Social Vulnerability is related to the socially vulnerable groups, based on different factors: a contextual factor that makes them more likely to face adverse circumstances for their social inclusion and personal development, the performance of behaviours, which entail greater exposure to harmful events or the presence of a shared basic feature (age, sex, ethnic background, disability), that exposes them to common risks or problems (Birkmann, 2006; Goodin, 1985; Ranci, 2010).

From a regional perspective, some possible indicators to identify social vulnerability are the following:

- Total expenditure on health (% of the GDP)
- Total public expenditure on education (% of the GDP)
- Total vulnerable employment (% of total employment): vulnerable employment refers to unpaid family workers and self-employed workers as a percentage of the total employment.

Institutional vulnerability is understood as the inability to properly communicate and coordinate different institutional levels, which expresses institutional rigidity and also its low capacity to respond to risk situations. The greater or lesser capacity to respond appropriately to risk situations would be linked to a greater or lesser degree of institutional vulnerability and to the capacity of institutional governance.

- *Voice and accountability*: It measures the capacity of a country's citizens to participate in the selection of their government, as well as the freedom of expression, freedom of association and free media.
- *Governmental effectiveness*: It measures the quality of public services, bureaucracy, the quality of the public administration as well as its degree of independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to those policies.
- *Regulatory quality*: It measures the government's capacity to design and implement sound policies and regulations that permit and promote the development of the private sector.
- *Rule of law*: It measures the extent to which agents have confidence in and abide by the rules of society, in particular, the quality of contract enforcement, police and courts.
- *Control of corruption*: It measures the extent to which public power is exercised for private gain, including both small and large forms of corruption as well as the control of the State by elites and private interests.

Economic vulnerability refers to the institutions' inability to manage a financial/economic crisis. This is the inability to return to the starting point prior to the risk situation

or crisis (Birkmann, 2014; Mechler, 2004; Whelan & Maître, 2010). More specifically, the greater the financial institutions and organisms' capacity to evaluate and react to economic losses caused by a socioeconomic or financial crisis, the lower the economic vulnerability. Both the strength and adaptive capacity of the economic system are decisive in this process.

- GDP per capita (US\$ in current prices)
- Expenditure on research and development (% of the GDP)
- Consumer price inflation (annual %): The inflation measured by the consumer price inflation reflects the annual percentage change in the cost for the average consumer of acquiring a basket of goods and services which can be at a fixed or variable rate at determined intervals, for example, annually. In general, the Laspeyres formula is used.

Environmental vulnerability refers to the extent to which natural and environmental resources are susceptible to being damaged, degraded or destroyed by their exposure to a hostile agent or factor. This factor is often uncontrollable (natural disasters) or may be related to the mismanagement of natural resources or of the pertinent environmental sustainability policies. The mismanagement, therefore, provokes a greater or lesser degree of environmental vulnerability that together with the natural unpredictability determines to a greater or lesser extent the risk of environmental disaster, affecting at the same time populations and ecosystems of the places where these disasters happen.

- *Consumption of electric energy (kWh per capita)*: The consumption of electric energy measures the production of power stations and cogeneration plants minus the losses occurred during the transmission, distribution and transformation and the own consumption of the cogeneration plants.
- *CO₂ emissions (kt)*: Carbon dioxide emissions come from the burning of fossil fuels and from the production of cement. They include the carbon dioxide produced during the consumption of solid, liquid, gaseous fuels and gas flaring.
- *Total annual extraction of freshwater (in trillion cubic metres)*: The annual extraction of freshwater refers to the total extraction of water without counting the evaporation losses in storage basins. The extraction also includes the water from desalination plants in countries where these are an important source.
- *Renewable fuels and wastes (% of the total energy)*: Renewable fuels and wastes form solid and liquid biomass, biogas and industrial and municipal waste, measured as a percentage of the total consumption of energy.

3.2. How does social impact happen?

Social innovation can be broken into different phases inside its lifecycle. These phases are necessary for the innovative process to be successfully implemented (European Commission, 2013, Santos, Cotter-Salvado, Lopo de Carvalho, Shutte, 2013; Mulgan, 2006). Although there is scarce academic literature on how these cycles operate we can distinguish different approaches on the different steps that SI undergoes, being the scaling of SI the final stage. The European Commission (European Commission, 2013, p. 6) differentiates four successive steps inside this cycle:

- Identification of new, unmet and/or inadequately met social needs
- Development of new solutions in response to these social needs
- Evaluation of the effectiveness of new solutions in meeting social needs
- Scaling up effective social innovations.

For Murray, Caulier-Grice, and Mulgan (2010), this lifecycle involves six stages where systemic change is the final goal of SI (see Figure 2).

- Prompts, inspirations, diagnoses
- Proposals and ideas
- Prototyping and Pilots
- Sustaining
- Scaling and diffusion
- Systemic change.

Alternatively to these approaches, we propose a new lifecycle of SI (see Figure 3). This model considers the processes of SI related to its drivers and barriers, where the final stage of the SI would be related to the dissolution of the innovation within a new main-stream different to the institutional context where it was once developed. Under this model, the scaling of social innovation is not an end or an indicator of success of the SI, but an externality.

As a result, this model focusses on the innovative failure enabling the design of appropriate policies for the different stages of the innovative process, due to the fact that each phase deals with its own barriers (obstacles) and drivers (capacities) to overcome these challenges.

This scheme is based on a series of assumptions that should be considered for its comprehension.

Assumption 1: Social innovations are influenced by context. This context is the expression of a series of social, economic, political, cultural and historic endogenous

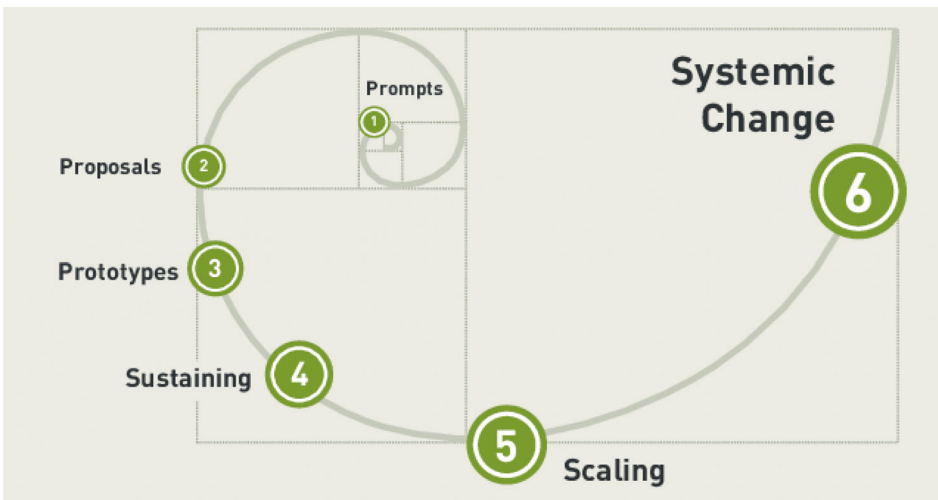


Figure 2. Six stages of Social Innovation. Source: Adaptation from Murray et al. (2010).

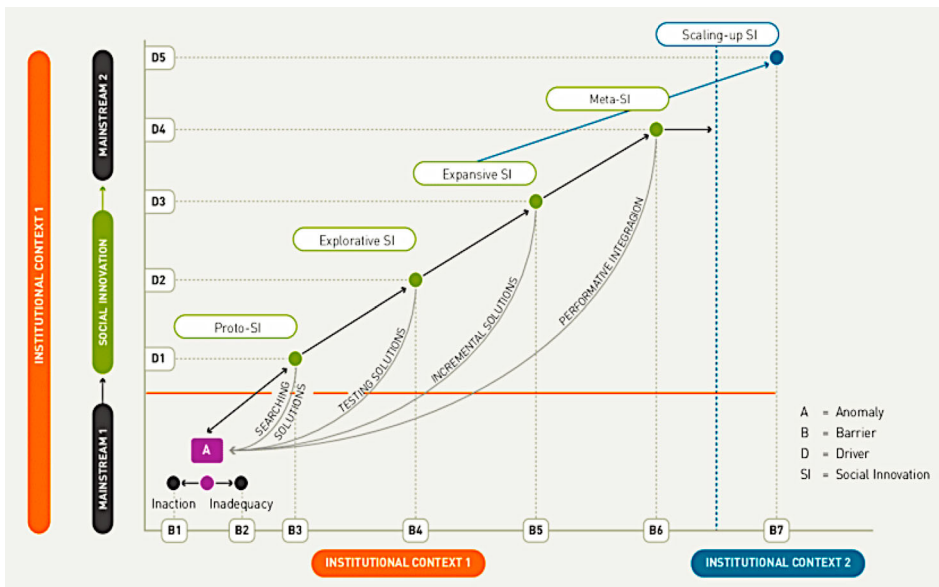


Figure 3. Lifecycle of Social Innovation. Source: Authors.

trajectories that are path dependent within every nation/region. Each institutional context develops its own resources and mechanisms to deal with a particular social problem or need by sharing and hegemonic vision of the types of challenges and their acceptable possible solutions for a particular welfare standard. These resources and mechanisms result in the articulation of public policy objectives or network policies (Agranoff & McGuire, 2003; Klijn & Koppenjan, 2016) with different actors/agents (companies, political parties, knowledge institutions, etc.)

Assumption 2: Social innovations are structured around the resolution of ‘anomalies’. An ‘anomaly’ expresses a type of social problem that cannot be addressed with the knowledge and resources inside the institutional mainstream. In the mentioned scheme (Figure 3), an anomaly is expressed as a starting point for any social innovation, that is to say, a social problem that generates a series of vulnerabilities for which the institutional context does not have an answer.

Assumption 3: Social innovation looks to be sustained overtime through the implementation of their processes and the achievement of long-term impacts. In this case, sustainability represents a vector that seeks to institutionalize an innovative solution in the long term. This implies that when social innovations are institutionalized they are no longer considered as innovations, becoming a part of the new mainstream.

Assumption 4: Although the nature of any kind of innovation does not directly respond to a linear model, for this particular scheme, we assume it does, due to the important interaction between drivers and barriers; thus each phase in the innovative cycle allows for the emergence of new drivers but also new unexpected barriers that can make the innovation fail.

Guided by these assumptions, we propose a new model of SI that discovers a different cycle with four main phases where drivers, barriers and impact are related. As shown in Figure 2, the scheme describes two different institutional contexts (1 and 2). The first

context evolves from an ‘anomaly’ that has been detected in a certain institutional mainstream (1) towards the integration of an innovative solution in a new institutional context (2). In every phase, there are different drivers (D) and barriers (B). The scheme tries to reflect the fact that the scaling process of SI is an unpredicted externality where the main purpose of SI is to resolve a social problem and then institutionalize its innovative solution in a new mainstream.

In this process, we can identify three different kinds of responses to an ‘anomaly’:

- The non-response: The institutional context does not give a response to the social problems/needs created by the ‘anomaly’, therefore, letting the problems/needs persist.
- The inadequate response: The institutional context deals with the ‘anomaly’ with the inadequate resources. The problem persists but some impacts may be reduced.
- The innovative response: The institutional context provides a new response.

We also have to consider that the innovative responses might also fail through the different stages of this cycle due to context resistance. Likewise, we can identify three kinds of failures in these responses:

- Failure by inaction
- Failure by inadequacy
- Failure by innovation where the SI is incapable of overcoming the barriers imposed by the institutional context.

The scheme reflects four different stages in the lifecycle of SI:

- (1) **Social proto-innovation:** The prefix ‘proto’ implies that the SI has enough potential by reflecting the conditions in which the ‘anomaly’ is produced. In this phase, organizations essentially mobilize three types of capacities: capacities of interpretation and acquisition of knowledge; capacities of knowledge integration and modelling of ideas (design); and capacities to connect with stakeholders (in [Figure 3](#), we identify these drivers as D1). Proto-innovations fail when they are unable to step into the exploration and testing phase.
- (2) **Explorative social innovation:** This phase is characterized by the implementation of experimentation processes where it is tested. In this phase, SI mobilizes three types of capacities: capacities of exploration and recombination of acquired knowledge; capacities of evaluation and systematization; and capacities to connect with new stakeholders. This phase can be considered as an SI since there is a piloting process behind the experimentation involving a certain level of empowerment of vulnerable groups. Failure is manifested through the incapacity to model the SIs.
- (3) **Expansive social innovation:** This stage involves the implementation and adaptation of SI through a series of progressive improvements which help its modelling. The innovation is modelled, tested and evaluated through an incremental process. This phase expands solutions by implementing them to problems of similar nature inside the same context (scaling-deep) (Santos et al., 2013), thus mobilizing the following capacities: capacities of knowledge exploitation; capacities of social and institutional diffusion; capacities to scale-up SI.

- (4) **Meta social innovation (mainstream 2):** In this phase, SI has been integrated in the mainstream, transforming it, and improving its institutional and cognitive competences, and therefore providing a successful response to social problems. It becomes a performative integration that changes the direction of the mainstream's network of policies linked to the 'anomaly'.

Table 1 reflects the interplay between drivers and barriers in each stage of the process in the lifecycle of SI.

For example, following the research done by Moghadam Saman and Kaderabkova (2015) in the framework of the SIMPACT project, welfare regimes in EU New Member States, fail to balance corporate and personal income taxes rates, which are comparatively lower to the average EU-15. This factor results in the increase of social and economic vulnerability in these countries, which translates into a failure – by inaction or inadequacy – of their institutional contexts to adapt or find policy solutions to this reality. As a result, individuals, social groups, organizations and/or institutions within these countries can mobilize and look for alternative and innovative social solutions to the social needs and problems derived from these series of 'anomalies' – problems – detected in this 'institutional mainstream' to face the barriers and use the potential drivers to solve them. This can give rise to new social innovations that are recognized by this institutional mainstream – bottom-up – and integrated into new 'public policies', which, inside their welfare regimes, attend these social problems. If this scaling process succeeds, then SI has been integrated into this new 'institutional mainstream', which can give rise to a 'new institutional context'. This process is accumulative and defines a series of new drivers and barriers specified and presented in the lifecycle of SI in Table 1.

This also implies that within the welfare regimes of these social systems, individuals, social groups, organizations and institutions go through different cycles/rhythms that shape and re-shape in different ways their institutional contexts across different scales of progress and adaptation. These processes can be caused and/or aided by market, political, social or cultural demands in these societies (Westley & Antadze, 2010).

Table 1. Drivers and barriers in the lifecycle of Social Innovation.

| Development stage | Drivers/Barriers |
|--|---|
| Failure by inaction | B1: Failure of the State or the market |
| Failure by inadequacy | B2: Failure of the State or the market |
| Social proto-innovations (searching innovative solutions) | B3/D1: Expresses the relationship between drivers and barriers that facilitate/hinder modelling innovative ideas |
| Explorative social innovation (testing innovative solutions) | B4/D2: Expresses the relationship between drivers and barriers that facilitate/hinder modelling social innovations (formalize the experiences in a social innovation pattern) |
| Expansive Social Innovation (incremental innovative solutions) | B5/D3: Expresses the relationship between drivers and barriers that facilitate/hinder incorporating incremental improvements (expand) in a modelled social innovation (scaling-deep) |
| Meta Social Innovation (transformative integration) | B6/D4: Expresses the relationship between drivers and barriers that facilitate/hinder modelling the incorporation of social innovation into the mainstream (and transforming into a paradigm) |
| Transfer Social Innovation (scaling-up) | B7/D5: Expresses the relationship between drivers and barriers that facilitate/hinder the transfer of modelled social innovations towards other social contexts (scaling up) |

Source: Authors.

4. Social Innovation Regime

As we have discussed in previous sections, the different approaches that have been considered for the development of SI indicators through different analytical levels and units of measurement are unable to showcase an integrated framework where the context (meso) and dynamics (micro) of SI are successfully represented. To solve this theoretical and methodological challenge, we suggest the concept of **Social Innovation Regime**.

This concept relies on the notion of ‘welfare regime’ (Bejaminsen & Andrade, 2015; Esping-Andersen, 1990). The ‘welfare regime’ is defined according to an ideal typology which categorizes the degree to which individuals and/or families are included in an acceptable standard of living by guaranteeing a reasonable level of welfare among its citizens (Esping-Andersen, 1990). This typology answers to the articulation of different dimensions such as the degree of de-commodification (expanding social rights beyond market logics), the State-Market and Family interplay in the structures of social protection and system stratification (Esping-Andersen, 1990; Moghadam Saman & Kaderabkova, 2015). These ideal types are divided into three kinds of models:

- *The Scandinavian-Social democratic model*: socially inclusive and universal protection through high taxing contributions. Strong intervention from the State.
- *The Continental-European-Conservative model* based on the sustainability of middle-class families which guarantees balanced welfare between the State and the Market through most Western European countries. The Family becomes the main welfare provider.
- *The Anglo-Saxon Liberal model*: private market reliance and deregulation based on the *laissez faire* approach where the market is the major welfare provider. There is limited intervention from the State.

Whelan and Maître (2010) have combined and amplified this classification of ‘welfare regime’ along with Gallie and Paugam’s (2000) notion of ‘employment regime’, and Bukodi and Róbert’s (2007) approach related to the employment protection legislation to define three new types of ‘welfare regimes’: (a) ‘the southern-European’ (family support systems, and poorly developed labour market policies – Greece, Portugal, Spain, Italy, Cyprus); (b) ‘the post-socialist corporatist’ (low levels of social protection and weakness of social rights – Czech Republic, Hungary, Poland, Slovenia) and (c) ‘post-socialist liberal cluster’ (more flexible labour market in Baltic countries like Estonia, Lithuania).

In this context, the concept of ‘Social Innovation Regime’ is applied to explain how institutional contexts can influence the emergence of SI when they fail to answer certain social problems or ‘anomalies’, thus resulting in the rise of ‘regional vulnerability’. The means by which vulnerable groups are empowered to face social problems due to an inadequate response from the institutional context, act as a driver of SI by connecting bottom-up approaches (micro) with top-down market and policy failures to answer to unattended social needs. This links vulnerability to institutional change (Terstriep, 2016, p. 56) and relates ‘social innovation contexts’ (macro–meso) with ‘social innovation dynamics’ (micro) (see Figure 4).

As a result, if we look at the typology of ‘welfare regimes’, inclusive and universal protection calls for a higher social expenditure inside countries and regions that are capable of

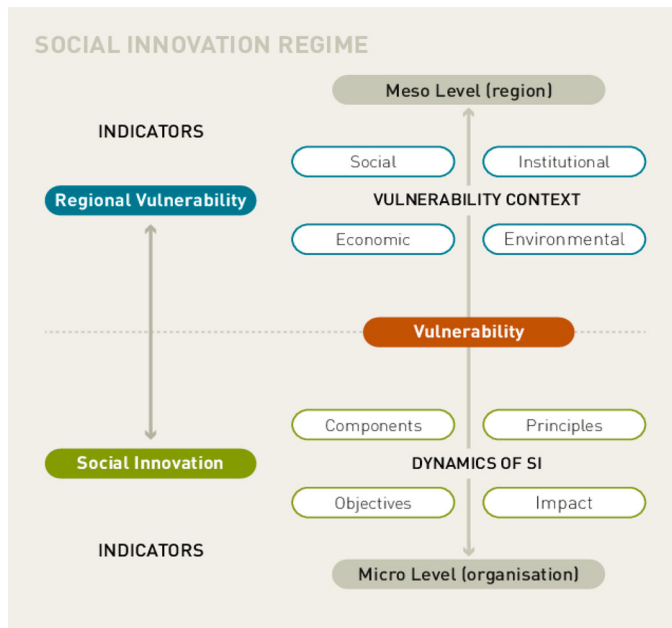


Figure 4. Social Innovation Regime. Source: Authors.

answering to the needs of vulnerable groups, hence, reducing regional vulnerability. This leads us to formulate an interesting ‘hypothesis’:

Higher regional vulnerability rates inside a country/region increase the probabilities of social innovations happening at the micro level, opening the gate for bottom-up approaches to emerge in an SI Ecosystem.

Evidence that proves the correlation between an increase in ‘vulnerability’ with respect to the typology of ‘welfare regimes’ can be found in the multidimensional approach to social exclusion developed by Whelan and Maître (2010) and Nolan and Whelan (2011), where they include a typological classification of the different levels of ‘economic’ and ‘social vulnerability’ with respect to the ‘welfare regime’ typology discussed above.

Moreover, while the statistical correlation between an increase in social innovation with respect to ‘welfare regime’ classification has not been proofed, the emergence of SI in SI ecosystems inside New Member States has been studied by Moghadam Saman and Kaderabkova (2015) within the framework of the SIMPACT project (see final report brochure of the project Boosting Sis Social and Economic Impact Terstriepe, 2016). As stated by these authors ‘In the EU, characteristics associated with the social fabric of New Member States affect the economic underpinnings of SI in terms of both supply and demand for SIs in a complex manner’ (Terstriepe, 2016, p. 36). Social welfare regimes in New Member States ‘usually bear mixed characteristics of various classical welfare regimes, influencing the demand for SI, and social capital level, which are mostly different from Old Member States, influencing the supply of SI’ (Terstriepe, 2016, p. 36). These factors result in an increase of voluntarism, social mobilization, empowerment and altruism of social actors (see case studies USE-REUSE [Slovenia], LUDE [Latvia], GIGA-SIB [Czech Republic]) (Terstriepe, 2016, p. 37).

Table 2. Dynamics of Social Innovation.

| Dimensions | Factors | Definition | Indicator |
|---------------|---------------------|---|---|
| 1.Components | 1.1. Actors | Actors refer to the degree of diversity of the relational capital organizations have when they develop social innovation activities | 1.1.1. Cooperation partners' degree of diversity (organizational proximity to develop social innovations) 1.1.2. Cooperation partners' degree of geographical diversity (geographical proximity) to develop social innovations |
| | 1.2. Resources | Resources refer to the level of human, technological and organizational capital organizations have when they develop social innovation activities | 1.2.1. Degree of diversity in the formation of human capital in the organization (human capital) to develop social innovations 1.2.2. Degree of diversity in the types of technologies available in the organization (technological capital) to carry out social innovations 1.2.3. Degree of diversity of the learning activities and internal transfer of the organization (degree of organizational capital) to develop social innovations |
| | 1.3. Institutions | Institutions refer to the level of social capital (rules, values and social and institutional confidence) organizations have when they develop social innovation activities | 1.3.1. Degree of diversity in the technical–social confidence towards other cooperation partners (social capital) for the development of social innovations |
| 2. Objectives | 2.1. Economic | Economic objectives refer to the economic inclusion of vulnerable groups | 2.2.1. Degree of coverage in the objective of inclusion and economic empowerment of the target population (reduction of the economic vulnerability) |
| | 2.2. Social | Social objectives refer to the social inclusion of vulnerable groups | 2.2.1. Degree of coverage in the objective of inclusion and social empowerment of the target population (reduction of the social vulnerability) |
| | 2.3. Institutional | Institutional objectives refer to the political inclusion of vulnerable groups | 2.3.1. Degree of coverage in the objective of inclusion and political empowerment of the social innovation's target population (reduction of the institutional vulnerability) |
| | 2.4. Environmental | Environmental objectives refer to the degree of environmental inclusion of vulnerable groups | 2.2.4.1 Degree of coverage in the objective of inclusion and environmental empowerment of the target population (reduction of the environmental vulnerability) |
| 3. Principles | 3.1. Efficiency | Efficiency refers to the capacity to meet social innovation objectives by maximizing resources and minimizing costs | 3.3.1. Degree of efficiency achieved in the implementation of social innovation |
| | 3.2. Governance | Governance refers to the degree of inclusion of vulnerable groups (target population) in the social innovation process itself | 3.2.1 Diversity of the mechanisms of inclusion of the target population in the social innovation activities |
| 4. Impact | 4.1. Organizational | Organizational impact refers to the improvements achieved in the organization for developing social innovation activities | 4.1.1. Diversity of organizational learning acquired for having developed a social innovation |
| | 4.2. Regional | Regional impact refers to the degree of geographical scaling of social innovation | 4.2.1 Diversity of geographical areas in which social innovation has been scaled |

Source: Authors.

In order to ‘analyse’ the ‘social innovation dynamics’ (micro level) resulting from these bottom-up approaches, we must take account of the Components, Objectives, Principles and Impact of SI (see COPI model in [Table 2](#)) (Rehfeld et al., 2015).

5. Final Remarks

The Social Innovation Regime approach to the measurement of SI is oriented towards the comprehension and development of how we can combine different perspectives and existent indicators to map social innovation contexts and/or ecosystems through an integrated perspective which takes account of the structural context where it is developed. This framework also feeds into the organizational/individual factors that come into play when it emerges and is further designed, prototyped and applied, offering a holistic vision that connects ‘social innovation contexts’ (macro–meso level) level, with ‘social innovation dynamics’ (micro level).

In terms of future research, the concept of ‘Social Innovation Regime’ offers three combined approaches towards this contextual understanding. The first one refers to the socio-economic and institutional conditions/factors that come into play when addressing social problems according to a welfare standard that already exists inside a country or region. This enables the comparison of regions according to their degree of vulnerability, which is the proper ground for the emergence of ‘anomalies’ and new social challenges. The second approach refers to the organizational factors such as the organizational capabilities and capacities to innovate or apply the objective for which social innovation was created. This perspective allows us to establish and distinguish between different patterns of social innovation and compares the diversity of actors/agents and organizations immersed in its process. Finally, this paper offers a way to link the meso and micro levels inside social innovation, by studying how the emergence of SIs are locked into contextual and institutional factors that need to be understood in order to influence social and public policies inside countries and regions. This connection offers us the possibility for these innovations to be adapted and scaled into general public programs which can improve welfare conditions from a macro institutional perspective.

Future research in New Member States, according to the welfare regime classification discussed in this paper, could and should be conducted in order to search and test the described exploratory model for a positive correlation between the supply of SI in these regions, their vulnerability rates and their capacity to influence public policies in their institutional contexts. In this sense, the connection between social and public sector innovation and regional governance models is an area of research within SI that needs further development in order to better understand the scaling process of SI. That is, how social innovation can influence the new design of public policies with respect to undetected social needs or social problems that can improve or give birth to the reconfiguration of welfare regimes and institutional contexts.

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