



Social innovation and rural territories: Exploring invisible contexts and actors in Portugal and India

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ABSTRACT

Social innovation has come to be identified as a key aspect of development. Objectives related to personal and socioeconomic development often inspire this type of innovation. Relevant goals can drive societies to fulfil citizens' needs while promoting overall empowerment and inclusion. This paper analyses the emergence and development of social innovation in rural territories in the opposing socioeconomic settings of Portugal and India. By addressing social innovation in rural territories, the paper contributes to the research and provides empirical evidence from contexts and analytical frameworks that have been neglected by most innovation scholars. The paper acknowledges the context of innovation processes and dynamics - rural territories in western and non-western countries. The consideration of two different, contrasting socioeconomic contexts provides a privileged framework to analyse the dynamics involved in the emergence and development of social innovation, namely the top-down and bottom-up approaches that characterize it.

1. Introduction

Social Innovation (SI) has become a widely accepted concept in urban, management and organisational studies. However, with the promising research arising, rural areas have been rather neglected in the SI research, despite the fact that these areas represent a large share of the world's territory and population. Available data indicate that rural regions represent in average 83% of the OECD countries' total area and that more than 40% of the world's population is living in rural territories (OECD, 2021; World Bank, 2021).

Rural areas face particular contextual challenges that can be addressed through SI. The paper contends that these challenges differ in different geographical contexts, being particularly sensitive to the socioeconomic profile of the region. The paper also contends that SI promoters can adopt different approaches to the SI process, being influenced not only by the socioeconomic context but also by the models and institutional arrangements used by public policy entities that support that process.

In terms of SI emergence and scaling-up, extant research has started to discuss the use of bottom-up and top-down approaches. This debate has gained momentum after an initial period, in which the generality of the authors pointed to the supremacy of the bottom-up approach.

However, there is still very little research on how these approaches are used in different contexts, particularly in different rural territories, and in the different phases of the SI process.

This paper addresses this gap by answering the following research question: what is the role of top-down and bottom-up approaches in the different phases of SI processes taking place in rural territories? This question guides an empirical research based on a qualitative methodology that studies the cases of two different SI promoters, acting in the regions of Baixo-Alentejo (Portugal) and in Jammu and Kashmir (India).

SI has been understood and manifests itself in a different way in different geographies, providing contrasting references when it comes to the processes of SI. In the European context, where Portugal is located, SI is explicitly at the center of research and political agendas. Several programmes and initiatives have been designed by the European Commission to promote SI in the member-states and their regions. Moreover, in the EU, SI in rural areas is closely related to, or even instigated by, public policies, namely rural development policy (Ferreiro et al., 2018). These policies recognise that half of the territories within the EU are located in rural areas and are quite often facing issues of rural exodus, ageing, marginalization and social exclusion and other associated problems (Živojinović et al., 2019; Dax and Fischer, 2018; Bock, 2016; Aldea-Partanen, 2011).

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In India, despite some research arguing that the concept of SI seems to have a lower centrality in political discourse and academia (Sonne, 2014), there is a lot of academic and policy attention attributed to grassroots innovations and informal sector innovations. Yet, Indian scholars have explored social entrepreneurs, their motivations, appropriation, and commercialisation prospects (e.g. Muchie et al., 2016; Gupta, 2016). In this country, SI is often seen as an outcome of a spontaneous, informal process and an outcome of efforts made by individuals and local communities to overcome problems encountered in daily life (Sheikh and Bhaduri, 2020). A comprehensive review of the literature on grassroots innovations, alternative forms of innovations and informal sector innovations reveals that more work has been undertaken in the global south and particularly in India. This is the first country in the world to have set up a dedicated office under the Department of Science of Technology, Government of India, to scout, reward and value add individual grassroots innovators. The President house hosted grassroots innovators and movements like Honey Bee Network, SRISTI (Society for Research and Initiative for Sustainable Technologies and Institutions) and NIF (National Innovation Foundation) dedicated to grassroots innovations have emerged from India.

The choice of the two cases was deliberated since they offer contrasting situations regarding the socioeconomic realities and predicting contrasting results for the uses of top-down and bottom-up approaches in the several phases of the SI process. Therefore, the paper draws on a “two-tail” research design of comparative case studies (Yin, 2018).

The socioeconomic realities of both countries are quite contrasting. These contrasts influence the way communities and governments address the response to social needs of rural territories and, therefore, the way SI emerges and evolves. According to the Human Development Report (ONU, UNDP), Portugal integrates the group of Very High Human Development with an index of 0,864, and India integrates the group of Medium Human Development with an index of 0,645. This corresponds to the following socioeconomic indicators: life expectancy at birth (82,1 in Portugal; 69,7 in India); expected years of schooling (16,5 in Portugal; 12,2 in India); mean years of schooling (9,3 in Portugal; 6,5 in India); Gross National Income (33, 282 PPP\$ in Portugal; 6681 PPP\$ in India) (UNDP, 2020).

Moreover, the results achieved by previous research uncovered research gaps in the understanding of top-down and bottom-up approaches contributions to SI in both countries (e.g., Sheikh and Bhaduri, 2021; Ferreira et al., 2018). This provides the ground to critically approach SI processes, namely the design and implementation of public policies on rural development taking place in peripheral regions in western and non-western countries, and to diverse logics in terms of bottom-up and top-down drivers of social novelties in territories and communities (e.g., inclusivity, empowerment, design new relationships within the community and territory’s resources - knowledge, natural resources). As pointed out by Christman in the approach of SI phases, namely the recommendations to public actors, SI should be taken “seriously as a part of rural development” (Christman, 2020, p.10).

The paper is structured as follows. First, the paper introduces the concept of SI and its conceptualisation within rural research (Section 2). Following that, the differences concerning the SI understandings and processes within the European and Indian contexts are presented. In addition, the interactions between bottom-up and top-down forces in SI are discussed (Section 3). Followed by the presentation of the methodology (Section 4), the paper goes on to present the main findings discussing the contrasting realities of the Portuguese and Indian cases concerning the emergence and dissemination of SI with a specific focus on the top-down and bottom-up logics at stake (Section 5). Finally, the findings are discussed and some conclusions are provided (Section 6).

2. Social innovation and spatial development

In the last decade the concept of SI has attracted the attention of scholars, policymakers and practitioners. The definitions abound and

frequently highlight different aspects of the SI phenomenon. The contribution of SI to the satisfaction of human needs, inclusion and empowerment is at the core of some of the existing SI definitions. Moulaert and MacCallum, for instance, define it as an “innovation that improves society – in terms of equity, inclusion and opportunity, among others – rather than only that which accelerates economic growth, productivity and market-rational behavior. [...] SI can act as a remedy to the negative social consequences – inequity, exclusion, marginalization – of growth-oriented innovation” (Moulaert and MacCallum, 2019, p. 11). In this line of thought, scholars stress the transformative power of SI (Avelino et al., 2017; Castro-Arce and Vanclay, 2020; Nyseth and Hamdouch, 2019), that is, its capacity to change agendas, institutions and agency and therefore to influence socio-political roles and routines, beliefs, knowledge, power flows, and resources.

Scholars recognise the importance of the context – in particular of the socioeconomic spatial context - in innovation processes. However, some contexts have been neglected by extant research and some authors increasingly call for the emergence of studies on the innovation dynamics in peripheralized regions. This is the case of Makkonen et al. according to whom “there is a need to learn more about how innovation is supported in the periphery and how to build up innovation environments that consider the local conditions of rural regions as a starting point” (Makkonen et al., 2020, p. 531). The analytical dimensions (‘innovation patterns’, ‘knowledge networks’, ‘information sources’) and the empirical evidence explored provide a new approach to the ‘geography of innovation’ (Makkonen et al., 2020). In fact, this research provides important insights into the connection between innovation and non-central territories, namely the “‘slowness’ of peripheral innovation – in particular its heightened reliance on internal capacities, local resources and technical information – is confirmed, as is the importance of external connections with actors in other peripheral and border regions as well as with actors in cities” (idem, ibidem). Rural territories have also been less studied by SI scholars, that have been more focused on developing elaborated approaches to SI in urban contexts (Moulaert et al., 2005; Nussbaumer and Moulaert, 2004; Gerometta et al., 2005; Angelidou and Psaltoglou, 2017; Cruz et al., 2017).

Recently, however, the research interest concerning the processes underlying the emergence, the spread and the impact of SI in rural context has been rising (Neumeier, 2012, 2017; Bock, 2012, 2016, 2016; Katonáné Kovács et al., 2016; Fink et al., 2017; Christmann 2014; Bock, 2016; Christmann, 2016; Noack and Federwisch, 2019; Castro-Arce and Vanclay, 2020). There is a belief that SI can contribute to the systemic change in rural regions, which have been regarded as ‘lagging behind’ or structurally weak. In fact, rural areas are quite often characterised by low densities (Dinis, 2006), ageing populations, difficulties in generational turnover [social and geographical], isolation, the emergence of social unrest due to migration (Di Iacovo et al., 2014), and the scarce availability of physical, human and financial resources (Espancia, 2014). However, such an image of rural areas has been challenged since, quite often, rural regions have the potential (due to the complexity, long lasting character and local rootedness of socioeconomic challenges) to find innovative ways in tackling those problems. As suggested by Neumeier (2012), SI might be one of the tools that help regions overcome existing challenges, as it represents an important pillar of sustainable rural development processes.

The understanding of SI within rural territories demands the consideration of particular capabilities and dynamics, namely the role and importance of external actors, including public ones, as well as their combination with internal resources and actors, and therefore the existence of multiscale networks. Kratzer and Ammering (2019) discuss the statute of local actors and the role of Biosphere reserves in rural territories by fostering SI and providing platforms for the exchange of ideas, the development of products and services and the integration in international knowledge networks. Existing literature considers that SI supports rural communities and contributes to their development in several ways, namely through building upon neo-endogenous strategies

that focus on mobilising/utilising local capabilities and resources and connecting those to wider environments (Neumeier, 2012). Through mobilising local resources, SI aims at satisfying local needs and simultaneously creating economic value (Di Iacovo et al., 2016). By enhancing more efficient collaboration between [local] actors (Grinberga-Zalite et al., 2015), SI facilitates the creation of networks (Neumeier, 2012; Gobattoni et al., 2015), thus, encouraging local linkages and collective learning cultures (Navarro et al., 2018). At the same time, while focusing on collaboration within existing or newly established networks, SI can help in adaptation of an innovative solution in the form of changed attitudes and practices (Richter, 2019) and change unsustainable behaviours and remove structural constraints (Gobattoni et al., 2015).

The concept of Grassroots Innovations (GI) is influential in the discussion of the role of innovation in improving the social dimensions of human life (e.g. income, empowerment, inclusivity). According to Sonne (2014), Western and Indian contexts correspond to two contrasting models regarding SI. It is interesting to compare these two contexts because it allows the reference to different ways to address the development of social value and change of community's life in the most basic sense. In India, there is a "long history of innovation initiatives related with social" (Sonne, 2014, p. 4). These are conceptualized as GIs, as well as Jugaad¹ and Frugal Innovations. These concepts are related to the improvement of life conditions and wellbeing in the most basic and urgent sense of the term, meaning progress in extreme poverty alleviation. The focus is on outcome, not on processes or relationships (Sonne, 2014) and, therefore, we argue that there is an alignment with the concept of SI presented at the beginning of this section as 'social outcome'. The social novelty is driven by goods, services and livelihood opportunities and targets low-income, the poorest ones in this society (idem). Gupta (2014) characterizes GIs into three different forms: the innovations at, for and from grassroots. The first category - innovation at the grassroots - constitutes innovations by common people without taking any assistance from the formal sector institutions. The second category - innovations for the grassroots - includes all innovations which are wittingly designed to meet the requirements of the people living near the bottom of the economic pyramid by individuals and organisations. Third category - innovations from the grassroots - are the innovations jointly developed by NGOs, formal sector or individuals in the informal sector or unattached professionals and companies in collaboration with local people. GI movements seek innovation processes that are "socially inclusive towards local communities in terms of the knowledge, processes and outcomes" (Smith et al., 2013, p. 114). Exploring the case of social technologies in Brazil, England, and Honey Bee Network in India, these authors uphold the argument that GI movements appear in reaction to perceived social injustices and environmental problems often arising in conventional innovation models. Examples of SI in India correspond to micro enterprise development, equal access to resources, social mobilisation and livelihoods promotion, social action with marginalized groups, women's collective agency development and empowerment, inclusive health practices, and improvement of quality-of-life initiatives (Banerjee, 2018). The main problems faced by these innovation processes involve funding, sustainability, scaling, and people's participation (Banerjee, 2018).

3. The interactions between bottom-up and top-down approaches in social innovation

Since the late 1970s, early 1980s, scholars of policy implementation have used the terms top-down and bottom-up to describe how decisions

¹ Jugaad is a Hindi term, meaning 'make-do'. The Oxford English Dictionary (OED) has officially accepted the word 'jugaad' in their latest update which means, 'a flexible approach to problem-solving that uses limited resources in an innovative way'.

are made and/or how policies are implemented (Sabatier, 1986). The debate between the two approaches is articulated in terms of the role of different actors in the policy making and implementation. In a top-down approach the decisions are made at the top by governments that design the solutions and plan their implementation, that are communicated to the lower levels of the hierarchy, that have little discretion in the implementation process. In a bottom-up approach several actors participate and interact, at the local level, to solve a particular problem. In the later approach, the changes are designed and implemented from the grassroots, arising from the joint involvement of a multitude of stakeholders that are often the people the policy will directly impact (Matland, 1995).

The interactions between bottom-up initiatives and top-down structures in the promotion and management of SI present theoretical and practical challenges. This debate revolves around the different phases of the SI process, namely i) the emergence (Baptista et al., 2019); and ii) the scalability and impact of SIs and its capacity to induce effective social change/transformation (Castro-Arce and Vanclay, 2020; Eizaguirre and Parés, 2019).

Several empirical studies support the idea that the emergence of SI is typically a bottom-up, small-scale process, led by the civil society and is highly local and contextualized (Grimm et al., 2013), enabling to address collective problems that governments are failing to solve (Eizaguirre and Parés, 2019). This bottom-up perspective is in line with the sociological tradition that places individuals and civil society actors as the main agents of SI (Baptista et al., 2019; Farmer et al., 2018), using entrepreneurial capabilities (Fougère and Meriläinen, 2019). In this perspective, agency-based explanations are central in the understanding of SI. Individuals strive to find innovative solutions to social problems, and, in this process, the social structures where they are embedded and collective action are of utmost importance. According to Eizaguirre et al. (2012), civil society actors can perform several roles in the process of SI influencing its governance, namely, organisation, (re)definition of problems, improvement of transparency of institutional action and legitimization of the incorporation of grassroots movements. There is the belief that ideas usually emerge from the grassroots, close to the problems, where innovators are better prepared to acknowledge the context-specific problems and assess the possible solutions (Seyfang and Longhurst, 2016). These grassroots initiatives are seen as a superior means to deliver welfare to the communities (Goldsmith et al., 2010).

In this context, it is possible to find several arguments supporting a bottom-up approach, often stressing that governments may not possess the knowledge or capabilities to identify SIs and to design good policies for its emergence and especially for its scalability (Seyfang and Longhurst, 2016). It is also common to find the argument that governments may have difficulties to address the problems of social minority groups since they are used to design standardised and universal solutions (Borzaga and Bodini, 2014) and that they tend to support specific organisations and projects (Adams and Hess, 2010). It is also acknowledged that governments tend to give insufficient attention to the potential impacts of grassroots initiatives in terms of job creation, local development and social cohesion (Eizaguirre et al., 2012).

However, some scholars support the need for a more active government intervention and for centrally designed public policies – and to a top-down approach - to promote not only the emergence of SIs but particularly to sustain and scale them (Millard et al., 2016; Castro-Arce and Vanclay, 2020). They contend that the top-down approach can be particularly relevant for some specific types of SIs. This is the case of macro SIs (Baptista et al., 2019) and of "pure social innovations", i.e., SIs that have characteristics of public goods, and would not happen without public policies (Pol and Ville, 2009). Some authors even consider that only the government can guarantee sustainability and balanced public value so that all segments of society benefit from SI (Millard et al., 2016). Arguments for top-down approaches go beyond the traditional market failures reasoning (e.g. the failure of price mechanisms; insufficient income; inadequate access to credit; market entry costs; the

shortage of education, information and opportunities; discrimination) (Baptista et al., 2019; Grimm et al., 2013) and also contemplate systemic failures related to interactions, infrastructures, institutions, articulation and coordination (Weber and Rohrer, 2012).

Trying to reconcile the bottom-up and top-down approaches in the SI process, some scholars advocate for multilevel approaches (Pradel et al., 2013). They stress the role of individuals/civil society actors in the emergence of social innovations and the importance of public policies to sustain and scale socially creative strategies (Eizaguirre et al., 2012) and the need of interaction between the government and the actors for the success of SIs that have emerged in local communities (Eizaguirre and Parés, 2019; van der Have and Rubalcaba, 2016). For example, in the context of health services, Farmer et al. (2018) show that the advantages, in terms of costs and technical feasibility, of the innovative solutions developed by local community members are not enough to guarantee their diffusion and sustainability and advocate for the involvement of other stakeholders at meso and macro levels. Eizaguirre et al. (2012) propose ‘bottom-linked’ practices that combine social and institutional innovations and are needed for transformative SI. In this line, Castro-Ace and Vanclay consider that bottom-linked governance “refers to a collaborative middle ground where actors from varied political levels, geographical scales and industry sectors converge to share decision-making” (Castro-Ace and Vanclay, 2020, p. 45). The authors also suggest that “bottom-linked governance occurs in the interactions between bottom-up and top-down” (Castro-Ace and Vanclay, 2020, p. 46) and, therefore, deals with the tensions between top-down and bottom-up practices (Eizaguirre et al., 2012). Within this logic, SI emerges at community level, led by individuals/civil society actors, but its effectiveness and scalability are promoted by higher-level public institutions (Eizaguirre and Parés, 2019). Therefore, this approach admits “the centrality of initiatives taken by those immediately concerned, but stresses the necessity of institutions that would enable, gear or sustain such initiatives through sound, regulated and lasting practices and clearer citizen rights guaranteed by a democratic state-functioning” (Moulaert et al., 2010, p. 9). Investigating the Portuguese reality, Pinto et al. (2021) conclude that, in general, there are various perspectives on the role of the State when it comes to the processes surrounding SI and that it does “not only depend on the will of the actors who develop and implement it, but on institutional conditions that support it” (Pinto et al., 2021, p. 66). Summing up, the bottom-linked governance provides “a multi-level middle ground where actors from various political levels, geographical scales and industry sectors come together to share decision-making” (Castro-Ace and Vanclay, 2020, p. 45).

Moreover, scholars increasingly stress the virtue of multi-scalar strategies (Eizaguirre and Parés, 2019). SI can have impact at micro, meso or macro levels of society (Furmańska-Maruszak and Sudolska, 2016) and some can and should be escalated to increase their use and geographical reach (Eizaguirre and Parés, 2019; Westley et al., 2014). SIs may target deep structural problems that affect a large population and involve large-scale impacts (Păunescu, 2014). Arguing for this position, Eizaguirre et al. (2012) suggest that “it is a limitation to restrict the scope of civil society initiatives to the local scale. Although it is easiest to identify how civil society organisations are tackling social exclusion at this scale, there are other second and third-rank organisations representing the interests of civil society initiatives that operate at other geographical scales” (Eizaguirre et al., 2012, p. 2011).

Also, the context (historical and geographical) matters in this debate with scholars arguing that “context – understood as a varying path-dependent and spatio-temporal configuration of constraints and opportunities – shapes how and where social innovation emerges and in what form” (Eizaguirre and Parés, 2019, p. 174). Scholars stress the divide between developing and developed countries: in developed countries, the economic dimensions and top-down logics tend to have a higher expression than in developing countries, where social objectives, social movements and grassroots initiatives tend to be more relevant (Baptista et al., 2019; Rogelja et al., 2018). This is the case of India,

where it is possible to find a myriad and extensive cases of innovations that promote social wellbeing of local communities. In this context, the future of SI is ‘People Centered Social Innovation’, a SI that is “transformative in its approach and aims to address societal needs by centering on the concerns of marginalized people, their contexts and strategies to address them” (Banerjee, 2018, p. 160). Thus, such an approach focuses on GI that “led bottom-up solutions for sustainable development responding to the local situation and the interests and values of the communities involved” (id.).

The cases under analysis in this paper provide contrasting examples of the top-down and bottom-up driving forces in the emergence, development, and dissemination of innovations. Drawing on the literature presented above, in order to identify the predominance of top-down or bottom-up approaches it is important to distinguish: i) the main actors involved in the SI process; and ii) the functions they are performing in the SI process. Moreover, it is relevant to consider the different phases of the SI process (Christman, 2020): problematization, emergence, dissemination and scaling up. Furthermore, the framework also considers the different scales of actors’ intervention and/or SI impact. These are the analytical dimensions that will be mobilised in the empirical study, and which are presented in Fig. 1.

4. Methodology

The paper resorts to a qualitative comparative case-study method. It presents two cases – two organisations that promote SI in rural territories - in contrasting socioeconomic contexts, Baixo Alentejo in Portugal and Jammu and Kashmir in India. The cases will provide empirical evidence that enables the discussion on the use of top-down and bottom-up approaches in SI processes in rural territories. The cases will also provide useful insights regarding the discussion of SI in its different phases and illustrate the complexity and diversity of situations.

As mentioned above, depending on the context, namely on the socioeconomic conditions, it is possible to find quite different situations and outcomes in terms of the predominant use of top-down and bottom-up approaches. Therefore, the choice of these two cases considers the importance of having contrasting situations (Yin, 2018) in order to support the differences of SI dynamics supported by literature (e.g., Baptista et al., 2019; Eizaguirre and Parés, 2019; Rogelja et al., 2018).

The research undertaken in investigating the Portuguese and the Indian case studies – ADC Moura and National Innovation Foundation, respectively – was qualitative, aiming at the understanding and clarification of central aspects of SI. The primary and secondary data was collected through different sources: semi-directive interviews to relevant actors in the field using a snowballing sampling (e.g. Noy, 2008), document analysis (e.g. internal strategic plans and reports), and analysis of other sources (e.g. web-page of the organisations). This approach was applied to identify the aims and objectives of the relevant actors in the SI process as well as to provide a more systematic overview of the

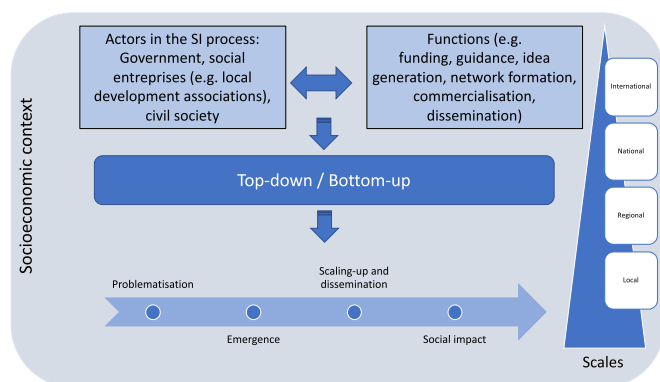


Fig. 1. Analytical framework. Source: authors’ own elaboration.

projects that were implemented together with the identification of stakeholders and partnerships. Interviews allowed the confirmation of documental sources. This technique was applied since the expertise in the field of SI is not a robust, clearly defined quality (Chatzichristos and Nagopoulos, 2020). In the Portuguese case, 16 expert interviews were conducted between March and May 2019. The experts interviewed were represented by staff members of the social enterprise ADC Moura, members of the local government, representatives of agencies for regional and rural development, as well as members of local action groups (LAGs) working in the Baixo Alentejo region within the LEADER framework (Fig. 2).

In the Indian case, the results presented consider research developed in different periods between 2010 and 2020. The first period was dedicated to the identification, contact and interviews with bottom-up social innovators. The fieldwork took place in five districts of Jammu and Kashmir (900 kms away from New Delhi, the capital of India) (Fig. 3). The second period considers the current information provided by the National Innovation Foundation, namely the identification of the innovations supported by this Indian Government entity. In both cases, the interview guide considered subjects as: i) the initial triggers that called for novel approaches to solving rural challenges; ii) the responses aiming at solving those challenges; and iii) the value both economic and social (and in the Indian case, environmental) being engendered by SI. The primary data collected help us recast the narrative around top-down and bottom-up approaches in SI dynamics, namely its emergence, scaling up and dissemination, as well as the social value in terms of rural development. In the Indian case this aspect is captured also by taking into account the role of patents (for the protection of novel knowledge),

commercialisation, formalisation, awards and mass scaling up of rural local innovations.

5. The two cases: ADC moura in Portugal and National Innovation Foundation in India

5.1. ADC moura: a Portuguese local development association in the promotion of social innovation

ADC Moura is a local development association that started its activity in the 1990s, not long after the Portuguese integration into the European Union. The organisation structures its work along several axes of intervention: institutional and organisational development, social and community development, rural and environmental development, education and training, and support for local initiatives. The ADC Moura's activity has a project-based nature. The projects fall under three main axes of intervention, namely those dealing with rural and environmental development, social and community development and education and training. They have received organisational and financial support through the European Union's frameworks, namely Erasmus+ (EU programme to support education, training, youth and sport), INTERREG (European Regional Development Fund), and PDR (Program of Rural Development). The association provides consulting and support to the entrepreneurial endeavours of the local population and focuses on capacity building and knowledge exchange. Therefore, the social value added by ADC Moura's activity is mostly related to empowerment and the development of business and entrepreneurship activities and skills at the local and regional level. The projects are usually collaborative and depending on the project, the partners involved operate at international, national, regional, and local scale.

The access to public European and national funds, via competitive calls and tenders has a central and critical role in the life and activity of the association, and is made within the European and Portuguese political agenda regarding social and economic development, namely in rural territories. Therefore, since the association activity is contingent on public funding received through projects that are aligned with the national and international/European programmes and priorities, SI emergence results from a blend of bottom-up and top-down approaches, affecting the involvement of actors and their functions in the process. The emergence of novelty in order to respond to local social problems is based on the knowledge that the association has on the territory, its population and challenges. This is a common characteristic of local development associations and is at the roots of their origin and further developments (Henriques, 2014; Amaro, 2003). The knowledge resulting from the territorial embeddedness of the association is combined with other national and international actors, namely Portuguese Government and European entities. These entities provide funding and guidance for action and form a networking space. Moreover, the design and implementation of networks on a multilevel scale is the result of ADC Moura activities and social capital constructed through time (e.g., trust and bridging, knowledge promotion on emerging sectors, building capacity, support actors, aiming at internationalization, and international recognition). To sum up, and regarding the emergence of SI within ADC Moura, this is the result of a combination between a bottom-up and a top-down process in terms of main actors involved and their functions in the process. These dynamics can be illustrated with some specific SI projects promoted by ADC Moura. The particular combination of bottom-up and top-down dynamics in SI is also visible in terms of dissemination and scaling up taking place in ADC Moura projects. In this regard it is important to mention the multilevel networks used by the organisation in some of its projects.

This is the case of two projects funded by Erasmus+ framework, which are not particularly targeting rural areas: My Smart Quartier and SPECHALE. The My Smart Quartier project was a consortium of six organisations from four EU countries (France, Italy, Portugal and Spain), which aimed at fostering digital inclusion in its social, economic,



Fig. 2. Field study area of Baixo Alentejo Source: authors own elaboration based on Comunidade Intermunicipal do Baixo Alentejo.

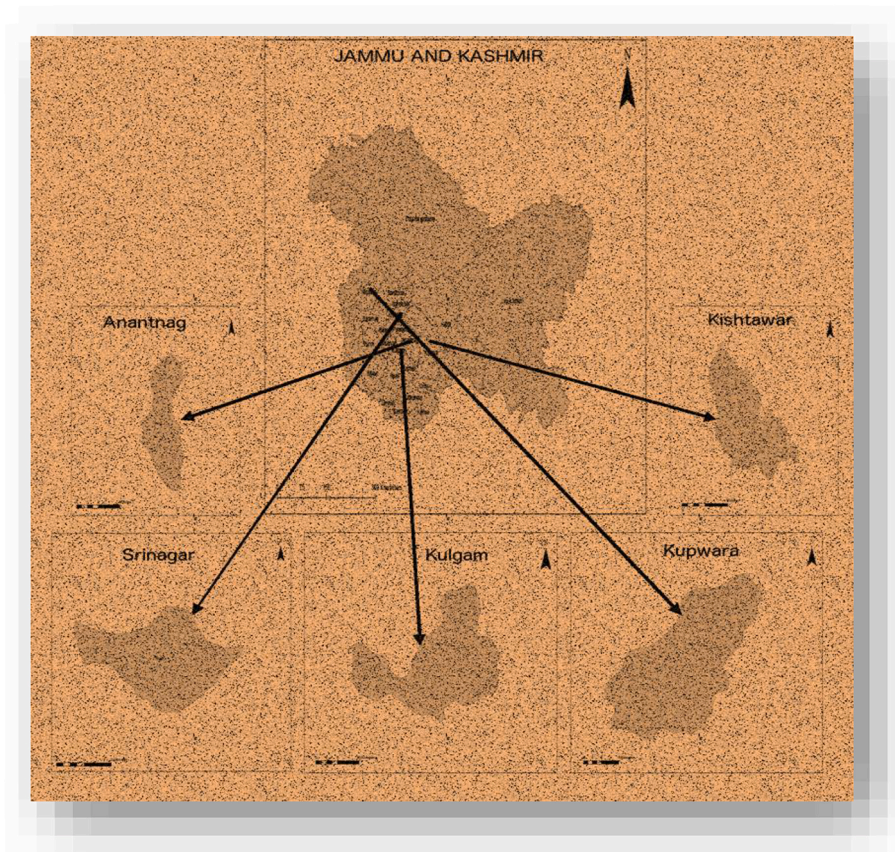


Fig. 3. Field study areas of Jammu and Kashmir. Source: authors' own elaboration based on ArcMap.

cultural and civic components. The activities were focused on the development of training courses for educators, facilitators and field mediators, and the projects proposed methodologies and resources to implement formative programs for adults to boost the digital competences in citizens under a life-long learning framework. The ideation of the project was led by the project coordinator, taking into account the areas of intervention privileged by the ERASMUS agency – in this case adult education. The development of the training courses followed a participative methodology, based on the development of networking for increasing citizen involvement through the combination of social and digital innovation. ADC Moura involved local citizens in order to assess the different digital divides, their needs and their positioning in relation to the digital tools (skills, difficulties, obstacles, uses). Following the development of the course contents, the results of the project were disseminated through events (in the partners countries) and publications. In order to scale up the innovative solution, the consortium created a pedagogical guide to educators and a practical guide on the tools and methods to create forms of digital and citizen mediation space. Moreover, as a project's spin-off, ADC Moura launched “Jornal da nossa Terr @”, a participatory digital newspaper aimed at the local population with the ambition of creating bridges between the local territory and its population and the global world, and to become one of the levers for the establishment of a participatory budget in Moura.

The second ERASMUS + project is SPECHALE - SPEcialists in Cultural Heritage and Attractive Living Environment, also targeting adult education. The project's main aim was to create an innovative training path in the field of culture and tourism. The project was led by ADC Moura and involved other six organisations from Portugal, France, Croatia, Latvia and Italy.

This is also the case of EPAM project (business development in the aromatic and medicinal plant sector in Portugal), a network promoted by another, Portuguese and public, network, the National Rural

Network, an initiative of the Portuguese Government (Ministry of Agriculture) (Ferreiro and Sousa, 2018). The EPAM network envisages the business development through the creation of a national and international network related to the production and commercialisation of aromatic and medicinal plants and products (e.g. tisanes, oils). The initiative is focused on the promotion of national production, based on the principles of collective quality strategy and on sustainable agriculture. EPAM is a good illustration of the use of the multilevel networks, providing the support to entrepreneurship as well as knowledge dissemination, both internally (through the initiatives' workshops and meeting for project partners) and externally (participation in national and international meetings and events). As already pointed out in a research on this project, “EPAM is a network-based project, enabling the constitution of other networks through the different, and diverse, activities developed through time (e.g., training, workshops, field visits); this aspect is visible in the networks established by different players in national and international context” (Ferreiro and Sousa, 2018, p.24). Therefore, the scaling up and dissemination of SI is promoted through established networks in a multilevel scale. The presence of the multiple levels (local, regional, national, international) in this process constitutes an important aspect of the organisation's activity in the project. ADC Moura acts as a bridge between actors (associations, government, universities and research bodies), and levels (local, regional, national, international) of the SI process. This bridging role and blend of bottom-up and top-down approaches is at the centre of ADC Moura regarding SI emergence and dissemination.

5.2. India National Innovation Foundation and grassroots innovation as social innovation

In India, the acknowledgement of informal innovators started in Mughal Period where incentives of varying nature were created to

recognise the ingenuity of self-made inventors. A couple of attempts were even made by the British Indian government to encourage the grassroots innovators by incentivizing them with rewards. Gandhi and Tagore also showed tremendous attention towards the bottom-up people's knowledge. In the recent past, the Government of India announced, in 1999, the formation of the National Innovation Foundation (NIF) and on February 28, 2000, NIF formally came into existence with a budget of approximately USD 5 million. NIF was created to offer a broader institutional support system to the work of Honey Bee Network and Grassroots Innovation and Augmentation Network (GIAN) which started functioning from 1988 to 1996, respectively, with Anil Gupta as the coordinator. Today, Honey Bee Network subsumes three organisations: Society for Research and Initiative for Sustainable Technologies and Institutions (SRISTI), NIF and GIAN. The major activities of this network include: 1) scouting and documentation of grassroots innovators and outstanding traditional knowledge holders; 2) value addition, research and development (R&D); 3) Intellectual Property Rights (IPR) protection and licensing; 4) information and communication technologies application and dissemination; 5) business development and micro venture (Gupta, 1999a; Ustyuzhantseva, 2015; Pattnaik and Dhal, 2015).

The mission of NIF is to help India become a “creative and knowledge-based society” by expanding policy and institutional space for grassroots technological innovators (NIF website, 2020). NIF propagates blending formal sectors knowledge generated in research laboratories and educational institutions with informally held knowledge of rural people, farmers and artisans. Following its activity of promoting grassroots innovations, NIF has currently a “large database of over 315,000 technological ideas, innovations and traditional knowledge, including proprietary, open source and common public knowledge” (NIF website, 2020). These innovations correspond mostly to technological innovations that were ideated and developed by individuals, their enterprises and social enterprises. A smaller number of innovations was developed by state departments, and universities. These technologies allow the resolution of social problems, and, therefore, the improvement of material conditions of life sometimes in the more basic sense (e.g., energy, water harvesting, food access). In the process of SI, NIF performs several activities, namely:

- Dissemination of innovation (e.g. Grassroots Technological Innovation).
- Organization (e.g. State level innovative farmers meet).
- Diffusion of technology (e.g. rural eggs incubators).
- Promotion of information-based practices (e.g. organic farming).

Therefore, the emergence of innovation takes place at the grassroots, corresponding to solutions invented by individuals or communities based in rural territories. GI in India have emerged in response to the vacuum created by the State and the market in solving complex problems of the people on the margin. In this sense, much of GIs are a form of social response, banking on various kinds of social interactions and feedback between neighbours, friends and family members for knowledge, resources and funds (Sheikh and Bhaduri, 2020). Thus, regarding the emergence of SI, NIF adopts a bottom-up approach. The grassroots novelties taking place at the bottom and at the margins of society are gathered, recognized and documented by NIF through its outreach program. During this process, innovators, after the idea generation, are encouraged to come to research laboratories (networking between different types of actors) to validate and upgrade their knowledge and innovations. Moreover, innovators are also encouraged to commercialise their inventions through IPR licensing. NIF also provides, in some cases, financial support to the innovators through prize money and a dedicated risk fund (Micro Venture and Innovation Fund). This top-down dissemination and scaling up process also includes the protection of innovators' knowledge with different forms of IPRs but also its recognition in various national award functions. Direct financial

assistance is being provided to the innovators and, in some cases, indirect funds also reach them. Many inventions by these self-made unsung innovators find large space in the leading newspapers. The knowledge and creativity at the grassroots are well disseminated using various channels of the media. Moreover, the initiatives gain great visibility through the National Award that is biannually conducted for ‘Grassroots Innovations and Outstanding Traditional Knowledge Holders’. These awards are given by the President of India. This is perhaps the only country in the world where awards are given to the informal innovators on a systemic basis and every year by a country head.

During the interviews with the innovators, they expressed to be contended with the current award system. More importantly, they show greater satisfaction when they find their name and innovation description in print and electronic media. However, some incentives like thrust on commercialisation and IPR are not free from problems. In fact, commercialisation and markets, at least in our case, apparently seem irreconcilable with the informal sector bottom-up innovations. Many attempts to push informal sector innovations to the market have not yielded any concrete outcomes. Presumably, innovators in the informal sector hardly ever consider ‘markets’ while conceiving their innovations. Accumulation of profits through commercialisation is not a priority. During the field visits, we noticed that these innovators with the assistance from NIF had tried venturing into the market but because of different market requirements they largely remained unsuccessful. Reasons for this market “debacle” are too understandable. Rightly argued by Bhaduri and Kumar (2011), attempts of large-scale commercialisation of informal sector innovations seem to have demotivating effects on some innovators by inculcating a belief that large-scale commercialisation is more important than solving local social problems. Among other reasons enumerated by the authors includes a requirement of the necessary modifications of the various aspects of an innovation (e.g. packaging, various product standards, advertisement etc.) to make it fit for commercialisation. This process is beyond the capacity of individual innovators. Here it is worth quoting what Rabindranath Tagore had stated in ‘City and Village’, that ‘property although fundamentally is a medium of self-expression comes intensely individualistic, and ‘anti-social’ (Sheikh and Bhaduri, 2020).

To sum up, the NIF case illustrates a bottom-up process of innovation supported by public policies and a strong involvement of government bodies. The public entity corresponds to the main promoters and supporters of GI, namely the dissemination and scaling up of grassroots technological innovations taking place in Indian rural territories in response to urgent needs. This is a case where a local bottom-up innovation finds a national top-down support and context of development. The local and national levels, are, therefore, the two levels where innovations emerge and develop (scaling up, dissemination). These innovations allow the improvement of life conditions of communities in a very concrete and immediate form.

6. Conclusion

In the context of the paper SI responds to social needs and promotes social inclusion and empowerment of communities. The research on SI taking place in contrasting contexts allowed the identification of important conclusions and insights related to the adoption of top-down and bottom-up approaches in SI processes. The cases under research combine top-down and bottom-up logics but in different phases of the SI process. In the ADC Moura (Portugal) case, consisting in the action and role of a local development association in a rural territory, the bottom-up process corresponds to the identification of territory specificities and main problems, which is combined with public and political agendas of European strategy on social and economic development, namely rural development. The critical role of public funds for projects implemented and run by local development associations illustrates the combination of a bottom-up and a top-down approach in SI emergence, scaling up and dissemination. The implementation and dissemination of SI projects

with European funding uses multilevel (local, regional, national, international) networks developed by the association through time and using social capital resulting from different projects and times.

The NIF (India) case illustrates a more bottom-up process in the emergence phase. The term ‘grassroots innovation’ is used within SI research framework in the sense that we are dealing with innovations, mostly of technological nature, with a very objective and immediate impact in communities’ wellbeing and life that emerge from the actors in local communities. The scaling up and dissemination of these innovations, are promoted and supported by national public entities through a top-down logic. The local and the national are the levels involved in the emergence (local), and dissemination and scaling-up (national) of innovations. This scaling up might present problems to the innovations that originally emerge as a response to social problems. These results show that social value is the most important created value with these GIs. Commercial and economic values are not at the center or correspond to the reason for the emergence of these innovations. They respond to urgent social needs and this is their main driver.

Therefore, we have found that in both cases the two approaches (bottom-up; top-down) are used in different phases of the process. But we also found a different sequence in the use of the two logics: whereas in the Portuguese case SI process has a top-down driver at the beginning and meets a bottom-up driver in its implementation, dissemination and scaling up, the Indian case is the opposite, that is, it starts with a bottom-up approach and then meets a top-down movement allowing its dissemination and scaling up. The Indian case seems to be aligned with the bottom-linked approach.

The contrast between the two cases and realities contributes to the understanding of SI as instigating change and with a real impact in people’s life. In what might be a surprising conclusion, our cases suggest that developed realities may depend more on top-down drivers in SI processes, whereas developing countries may have more bottom-up cases in the responses to social problems such as poverty and social exclusion.

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