

Quadruple Helix partnerships for social innovation: A case study of the Spanish region of Castilla-La Mancha

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Abstract

This study explores the state of social innovation (SI) in the Spanish region of Castilla-La Mancha, focusing on its collaborative aspects from the perspective of the Quadruple Helix (QH) model. Using a qualitative approach, it examines the existing support mechanisms for SI, the roles played by the government, industry, university, and civil society, their motivations, and the challenges these sectors face regarding SI. Based on a thematic analysis of primary data consisting of semistructured interviews with regional experts from the four QH sectors, as well as secondary data, which comprises regional policies, this study presents an overview of the SI ecosystem of Castilla-La Mancha. The results suggest that QH partnerships can facilitate the implementation of SI in the region, where each of the sectors can positively contribute to the initiatives. While the QH model for SI does not appear to be established yet, there is a strong motivation for collaboration and a willingness to co-create solutions to the existing challenges. This diagnosis of the current situation can guide the public administration, as well as the private and third sector, in future endeavours.

Keywords: social innovation, Quadruple Helix, Castilla-La Mancha, co-creation, social entrepreneurship, regional innovation.

Introduction

Human capacity to innovate has been crucial for our civilisations. The social dimension of innovation has been present in the evolution of societies: habits, practices or institutions that today are taken for granted like money, laws, the modern state, or universal suffrage were at some point in the past social innovations (Cajaiba-Santana, 2014). As noted by the same author, considering the intended result of an innovation is key to advance towards new paradigms in innovation studies. To this end, he distinguishes between technical innovation, whose main goal is creating economic value, and social innovation (SI), whose purpose is purely social. Both types of innovation can bring along the result intended by the other, but the initial intention is key to grasp the essence of SI.

While innovation studies became prominent over the past century, Cajaiba-Santana (2014) observes that SI has not awakened much interest until recently, when its popularity has not only risen in research, but also among policymakers. Political actors like the European Commission (EC) have paid increasing attention to this phenomenon, as it presents itself as an approach to fight against some of the most pressing societal challenges. In this context, new constellations of actors are encouraged to work together in order to find a common directionality in addressing grand challenges: by joining policy arenas and public debates, agency has moved from a centralised government to a distributed group that includes civil society (Kuhlmann & Rip, 2018).

This paper studies the realisation of SI focusing on QH collaboration dynamics in Castilla-La Mancha (CLM), a Spanish region located in the middle of the Iberian Peninsula. It aims to investigate the state of SI to understand how, and if, it is being enabled, and to uncover the challenges found in the process and the motivations of the four QH sectors. The main question that this study tries to answer is as follows: How is SI being enabled in the Spanish region of CLM? This is explored by answering the following subquestions: (1) How are public policies enhancing SI?; (2) What are the challenges faced by the QH sectors regarding SI?; (3) What are the roles of the different QH sectors in SI?; (4) What are the motivations of QH actors to create partnerships for SI? The results of this study can be considered of relevance for better recognising the characteristics that potentially lead to the successful implementation of SI, especially in its collaborative aspect.

The rest of this work is organised as follows: a conceptual framework which outlines the main theoretical ideas underlying this study, followed by a concise review of previous studies regarding the roles of QH sectors, and the challenges and motivations in SI. We proceed to present the methodology and the process of data collection and analysis. Findings and discussion are then detailed, culminating in a conclusion.

Conceptual framework of analysis

Social innovation

Our changing societies are constantly facing problems that are not easy to approach. Rittel

& Webber (1973) termed these issues as wicked problems: they are difficult to identify and describe, are unique and contextual, often are a symptom of other problems, and are present in almost every public policy dilemma. These important yet complex challenges require innovative approaches that consider the complexity and multidimensionality of such intricate matters. Social innovations can offer new paths towards such goals.

According to Howaldt et al. (2016), SI can be described as a set of new social practices in specific areas, initiated with the objective of trying to answer certain issues in a better way than the established practices allow. Generally, we can say that SI has non-profit goals and seeks common good. In addition, it often involves a collective approach. For Pol & Ville (2009), an innovation can be termed as SI when “the implied new idea has the potential to improve either the quality or the quantity of life” (p.881). The authors suggest that initiatives that improve education, environmental quality or life expectancy can be considered SI. As a new approach, it is expected to provide better alternatives than the traditional technology-centred innovations when facing today’s challenges (Terstriep et al., 2020). For this purpose, new governance models should emerge, where political participation and self-organisation become central, there is consistent collaboration between actors, and processes that assist in the diffusion of innovations (Howaldt et al., 2016).

Social innovation is considered highly contextual and path-dependent, and is strongly connected with the development of new configurations of social relations, including power relations (Moulaert et al., 2013). As such, a large part of studies in SI take the concept of territory as a central element, where SI leads to the transformation of spatial relations (Van Dyck & Van der Broeck, 2013). For this study, the concept of territory is central, given that the focus is on regional SI that is initiated, developed, and implemented by and for regional stakeholders. In addition, SI as presented by Moulaert & MacCallum (2019) builds on the belief that society can support human needs when there are enough conditions to promote collective action. This collective action is often specific to a territory, where local and regional agents are the ones who encompass the transformation of social relations (Moulaert, 2009).

In short, in this work, SI refers to all the processes, methodologies, products, projects,

and generally innovative ideas that are put into practice, whose main goals involve addressing societal challenges and that, in one way or another, aim to improve the quality of life of the community, and especially of vulnerable groups. Additionally, the aspect of collaboration and co-creation in the innovation process is essential, where civil society should be both the user and an active participant.

Quadruple Helix model

The Triple Helix model of innovation explains innovation systems through the collaboration of three helices, that are university, government, and industry. These three agents interplay in complex ways to foster innovation and develop a knowledge-based economy (Leydesdorff & Etzkowitz, 1998). Meanwhile, the QH model of innovation does not only include these three spheres, but also considers civil society and media- and culture-based public as key agents in the innovation ecosystem (Carayannis & Campbell, 2009). This model emphasises the concepts of knowledge society and epistemic governance (Carayannis & Campbell, 2021). On one hand, culture and values of civil society are crucial for an innovation culture to prosper. On the other, the message that is transmitted by the media has a profound impact on the way citizens see their reality, thus becoming essential for the role assigned to innovation and knowledge among their priorities.

In their literature review about both the Triple and the Quadruple helices, Cai & Lattu (2021) explain that a number of authors (see for example Nordberg et al., 2020) have opted for the latter precisely because of its inclusion of civil society, which can be especially meaningful in the analysis of SI. As the authors highlight, the QH model puts users at the centre. As posited in SI ideas, initiatives are both devised by and for civil society, which becomes not only a fourth helix, but also contextualises the Triple Helix (Carayannis & Campbell, 2018) in an ecosystem where the public is part of both knowledge creation and knowledge application. In addition, as Cai & Lattu (2021) argue in their paper, QH provides enough flexibility, as its fourth helix can be understood as a fluid construct, made up by actors that are by far more heterogeneous than the other three sectors, and thus cannot be seen as parallel to these. Furthermore, in their study, Butzin et al. (2014) highlight the relevance of using the QH model to study SI, and argue that

“certain constellations of actors (triple helix and recently quadruple helix) seem to be a fruitful driver for the generation of knowledge and innovation” (p116).

In light of these considerations, in this study, the QH model is used to explain SI as a process of co-creation. In the extant literature, there is a general belief that SI requires the collaboration of a number of agents in the form of complex networks, both formally and informally (see for example Howaldt et al., 2014; Nicholls & Murdock, 2012; Unceta et al., 2020). This need for partnerships leads to an increasing number of QH model dynamics when it comes to SI (Bellandi et al., 2021). We consider SI as an open process that calls for the participation of multiple groups and sectors, namely those included in QH, and as a combination of top-down and bottom-up approaches.

Quadruple Helix sectors in social innovation

The roles that QH sectors can play in SI are varied according to previous studies. The most predominant ones in each sector are presented in this section.

As far as academia is concerned, some authors suggest that university can act as a mediator, on top of its more traditional role of knowledge provider (Bellandi et al., 2021; Benneworth & Cunha, 2015; Kumari et al., 2020; Milley et al., 2020). Furthermore, Benneworth & Cunha (2015) posit that universities can provide material resources in the form of available facilities and financial support.

Regarding the role of governments, Hasche et al. (2020) employ the QH model to study how relationships between different actors contribute to value creation in regional innovation initiatives. Their results show that the government mainly contributes by funding the projects, in line with the findings of Notarnicola et al. (2022). They also argue the responsibility of public players to create the right environment and the necessary regulatory framework for SI to flourish. In addition, local governments can particularly have a leading role as facilitators and promoters (Jungsberg et al., 2020; Vercher, 2022).

As for the civil society sector, Nordberg et al. (2020) argue that community-based initiatives can result in successful SI by looking at how action groups can contribute to the formation of SI networks supporting sustainable rural development. In a different

study, civil society as a community was found to be highly relevant in the initiation phase by providing ideas, while civil society as an organisation had an important role in decision making (Jungsberg et al., 2020). Biljohn & Lues (2020) found that an essential role of civil society is also providing information about their circumstances in order for stakeholders to better understand the existing problems. Local communities are also important in promoting SI (Vercher, 2022). In addition, Yang & Holgaard (2012) found that NGOs have a relevant role as knowledge providers and as mediators. These non-profit actors are also, as found by Notarnicola et al. (2022), changemakers; that is, they introduce new approaches to collaboration. Additionally, the role of the third sector as an intermediary support structure is posited by Lukesch et al. (2020).

When it comes to the industry sector, companies can be the initiators of SI, as shown in the case study of a developing company that created “a field for urban development and creative experiments under the premise of converting the former industrial area” (von Schnurbein et al., 2021, p.6), where they put the citizens at the centre by inviting to participate and share their ideas on how to make the space useful for them. This role is also evidenced in a different study, where the business sector is described as a promoter (Vercher, 2022). Other studies argue that the business sector can fund initiatives by acting as a donor (Notarnicola et al., 2022). The findings of Martinez et al. (2017) are in line with this role of resource provider, and also add the role of knowledge provider, arguing that they have the expertise to manage and scale up processes. Nevertheless, the results of the multiple-case study by Lukesch et al. (2020) show that the presence of the business sector does not appear to be prevalent in SI.

A classification of the identified roles as described in this section is displayed in Table 1.

Table 1: Roles of QH sectors. Source: Author’s own conceptualisation.

Actor	Roles
Academia	<ul style="list-style-type: none"> • Mediator • Knowledge provider • Resource provider
Industry	<ul style="list-style-type: none"> • Resource provider • Knowledge provider • Networker • Initiator

Government	<ul style="list-style-type: none"> • Resource provider • Facilitator
Civil society	<ul style="list-style-type: none"> • Networker • Knowledge provider • Changemaker • Intermediary support

Challenges and motivations for social innovation

The purpose of this work is to uncover the most important challenges and motivations across QH sectors when it comes to SI. In this section, we set forth findings of previous research in this regard.

Miller et al. (2016) studied knowledge transfer (KT) in QH model ecosystems. In this open innovation context, their results suggest that new challenges emerge due to the diversity of involved stakeholders. Particularly, they argue that KT can be impacted by power relationships. This goes against the proposition of an effective QH model, where all actors are mutually interdependent. Nguyen & Marques (2022) explore the perceptions of stakeholders on the implementation of QH collaboration in a living lab, and whether it contributes to regional innovation. Their results emphasize the relevance that civil society participation has in the enhancement of research and innovation in the region. While all the four actors of QH perceived civil participation as appealing, interactions are complex and require further development for a functional implementation. In addition, the industry was found to show little engagement as compared to the others, and communication was not efficient. Moreover, when different agents are involved in an innovation process and thus are responsible for it, not having a clearly defined accountability for what is expected from them can hamper the process (Domanski et al., 2020). Some other barriers were the absence of citizens' trust, a perceived lack of responsiveness from governments, the absence of a strategy, or the lack of institutionalisation of SI (Biljohn & Lues, 2020). Authors like Morawska (2022) and Bayuo et al. (2020) suggest that the general absence of a recognised status of SI might be a corollary of the existing confusion around the concept. Likewise, Monteiro et al. (2021) studied the status of SI in two Southern European universities, where they discovered that a common feature was the lack of a definition of the term. Along these lines, strategies rarely mention SI, and universities do not possess dedicated SI units or mechanisms (Morawska, 2022). When it comes to

engaging external actors in SI, not having a recognised status at the institutional level can be an important obstacle. Another barrier is the lack of incentives for the institution as well as for the academic staff to become involved in SI activities (Bayuo et al., 2020; Monteiro et al., 2021). Generally, institutions do not provide funding for it, partly due to pressures on prioritising activities that can generate economic returns (Monteiro et al., 2021). In addition, it is likely that SI activities performed by universities are taking place but not being recorded properly (Morawska, 2022). In this regard, there is a lack of indicators to measure SI activities and measuring it is a complex task (Monteiro et al., 2021). Finally, universities should create more mechanisms to support relationships with other QH actors if they are to become relevant agents in the SI ecosystem (Miller et al., 2016). According to Audretsch et al. (2022), one of the issues that emerge when it comes to policies to help create an environment encouraging SI is the short-term thinking in political agendas. The authors suggest that in order to create the necessary conditions for SI to prosper, it needs to be included in agendas and political commitment has to exist. Sector silos and the absence of public support are challenges for SI as well (Lukesch et al., 2020).

In relation to the motivations, a study conducted by Ibanez et al. (2022) found that, in situations where governments' capacity to respond to stakeholders' needs becomes limited, QH actors come together to collaborate as a response. This aligns with the motivations for SI as indicated by Howaldt et al. (2016), that is, the need to respond to specific social demands. In another study, Biljohn & Lues (2020) found that the local government, academia and citizens working together create a positive partnership to generate public value and enhance the delivery of services in the public administration. Furthermore, the involvement of users in the process can lead to higher levels of satisfaction (Verschuere et al., 2012). Vercher (2022) similarly found that new forms of coordination between different actors are key to the development of SI. In these new social configurations, the author argues that actors that are perceived as being neutral can successfully lead SI processes and contribute to the creation of new networks. In another study, the findings show that it is important to have a "political contact point," that is, someone who is in a position to help social innovators and whose role is to support SI activities and to give it enough visibility (Audretsch et al., 2022). In addition, they argue that creating a culture where people feel safe to give their opinions is essential, since

communication and debate are key for new ideas for SI. Moreover, civil society feels motivated to take part in partnerships because they see it as a way to influence regional and local development (Roman et al., 2020), therefore, there is an increased sense of impact (Avelino et al., 2020). Bellandi et al. (2021) argue that QH models for collaboration can provide useful structures for the governance of SI. In this regard, for collaboration to take place and succeed, Domanski et al. (2020) argue that intermediary structures are essential. Another benefit of taking part in QH partnerships for SI is the access to more resources by all stakeholders (Ibanez et al., 2022). Additionally, experience and expertise are shared, facilitating knowledge sharing and diffusion (Kumari et al., 2020).

The collected motivations and challenges are summarised in Table 2.

Table 2: Motivations and challenges of SI. Source: Author's own conceptualisation.

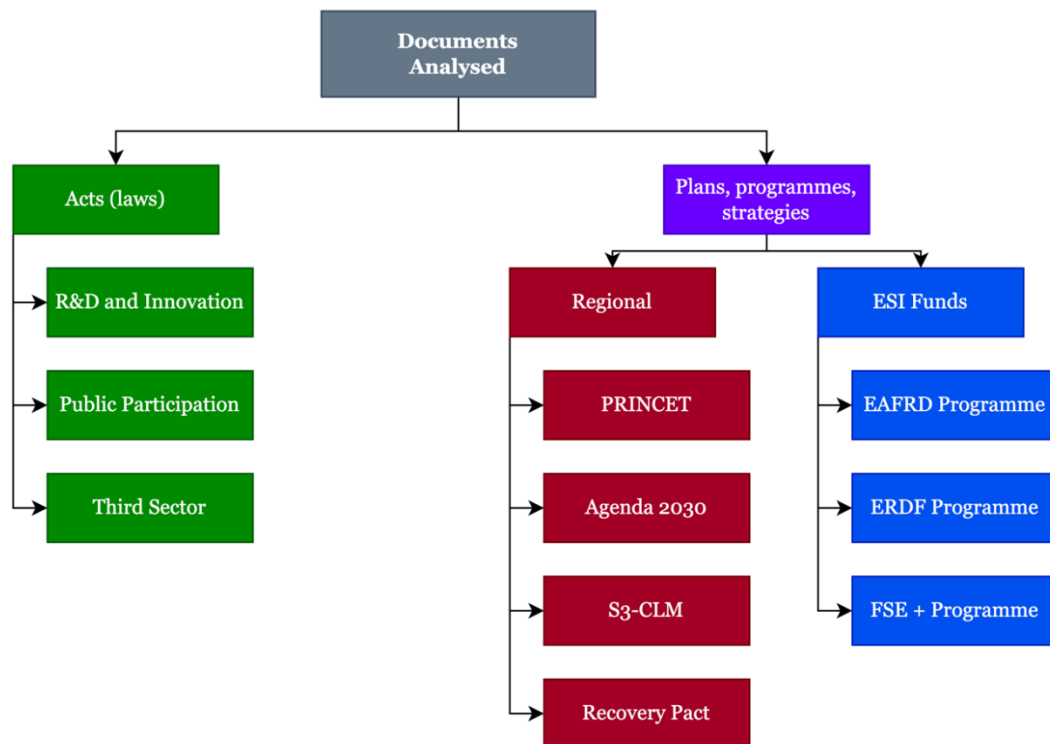
Motivations	Challenges
<ul style="list-style-type: none"> • Responding to needs • Creating public value • Improving delivery of public services • Improving level of satisfaction of users • Structure for the governance of SI • Creating new networks • Boosting visibility • Impact • Accessing resources • Knowledge sharing 	<ul style="list-style-type: none"> • Diversity of stakeholders • Power relationships • Lack of initiative • Distrust • Ineffective communication • No supporting framework • Lack of understanding • Absence of incentives • Measuring SI • Silos

Method

For this exploratory study, a qualitative research design is employed, specifically a case study which allows us to observe how different mechanisms are enabling or impeding SI in the region of CLM. Regarding data collection, on one hand, primary data were collected through semi-structured interviews, which served as inputs from individuals representing the QH sectors in CLM. On the other, secondary data were gathered from

policy documents (Figure 1 shows a diagram of the documents analysed). In addition, this study used a short questionnaire to cross-check the information obtained through the interviews (see the questionnaire in the Appendix). This questionnaire was administered immediately after each interview. It was meant to be understood as an exploratory inquiry, which can help identify certain patterns, but always bearing in mind that the limited sample is not representative.

Figure 1: Documents analysed. Source: Author's own conceptualisation.



The study used purposeful and snowball sampling. A total of 11 participants were interviewed (see Table 3 for a summary of the main characteristics of the participants). The interviews were conducted between February 15 and April 13, 2023, and they were audio recorded and transcribed by the researcher. On average, each interview lasted 30 minutes.

Table 3: Participants and their roles. Source: Author's own elaboration.

Participant	Sector	Role
Aca1	Academia	Technology Transfer employee.
Aca2	Academia	Professor and member of the staff of a vice-rectorate of UCLM.
Aca3	Academia	Professor at UCLM and coordinator of a SI project.
Civ1	Civil Society	Leadership position in regional delegation of a third sector organisation.
Civ2	Civil Society	Promoter of activities for local engagement in collaboration with other agents.
Civ3	Civil Society	Leadership position in a third sector sub-regional association.
Gov1	Government	Leadership position in a regional-level government department (political role).
Gov2	Government	Coordinating position in a regional-level government department (technical role).
Ind1	Industry	Social entrepreneur.
Ind2	Industry	Employee in a private business which consistently collaborates with the regional government to provide services to citizens, particularly vulnerable groups.
Ind3	Industry	Social entrepreneur.

The data were analysed thematically using the qualitative analysis software ATLAS.ti. According to Braun & Clarke (2006), “thematic analysis is a method for identifying, analysing, and reporting patterns (themes) within data. It minimally organises and describes your data set in (rich) detail” (p.6). In this work, inductive coding was employed, since the starting point to extract themes is the data, and codes emerged from that. Through this process, which was not linear, we were able to identify similarities and differences in the content, interpret some patterns and finally delineate 20 categories around three main themes: challenges, motivations, and roles.

Triangulation, one of the typically used methods by qualitative researchers (Creswell, 2012), has been applied. In Creswell's words, triangulation is used for “corroborating evidence from different individuals, types of data, or methods of data collection in descriptions and themes in qualitative research” (p.283). In order to triangulate the data, participants belonging to the four sectors represented in the QH were interviewed.

Regarding the types of data, there are primary and secondary data obtained from different sources. Lastly, two methods were used for data collection, documents and interviews. Furthermore, the cross-check questionnaire can also be considered to enhance the data.

Findings

The challenges of social innovation

The process of developing and implementing an SI initiative is complex. In this section, we examine the challenges faced in such process. Across the analysed documents, SI is not mentioned or recognised. In this regard, Gov1 argues that “there is an absence of a defined programme, with goals for the medium or long term, which could be considered a strategy or plan for social innovation in the region.” This lack of recognition and the absence of a regulatory framework of SI can be an obstacle for its development.

The existing regional mechanisms that could potentially support SI initiatives lack clarity. While a number of grants are offered for projects that address social challenges in CLM, obtaining such grants requires extensive knowledge of their operational processes:

In Castilla-La Mancha, there are many grants, both for businesses and associations, which give you financial support for your projects. What is the issue? To apply for those grants, you need to be really well informed about how grants work. (Ind1)

Therefore, bureaucracy is an important challenge adding to the complexity of the process. Civ3 stated: “I have found an administrative barrier along the years since I have been trying to offer things.” More precisely, long and obscure administrative processes can potentially discourage stakeholders from seeking to implement SI initiatives.

Another aspect that makes SI complex is the fact that it is meant to address social challenges, which implies touching upon sensitive topics. The formulation of the problems is complex in itself, and seemingly unrelated areas can be interconnected. Aca3 explains that “processes need to be thoroughly understood, especially when we deal with stigmatised groups, then the process is even more complex and more difficult, because

on top of it all you also need to break certain barriers.” This demands for alternative, flexible approaches that differ from the system’s view in the most traditional sense of technological or economic innovation.

Another aspect hampering SI is the lack of capacity of individuals from all sectors. It is not unexpected to encounter capacity constraints in a field that is only emerging in the region of CLM. Civil society is particularly critical towards their own capacity in the third sector:

I also think that we frequently lack training in the third sector to be able to identify that what we are doing can actually be regarded as projects and initiatives that are part of that social innovation, but we don’t identify it as such. (Civ1)

Notwithstanding this self-awareness, the participants of this sector showed a clear understanding of SI, and the third sector is the one promoting most initiatives aimed at addressing social challenges in the region. Still, individual civil society actors, as the beneficiaries of SI, must be empowered with the capacities and the knowledge necessary to engage in participative processes (Benneworth & Cunha, 2015; Vercher, 2022). The need for capacity building has also been recognised across policymakers in this work, as indicated by Gov1: “there is a knowledge deficit in social innovation in the public sphere, not only among employees and experts, but also political actors.”

The limited availability of financial, human, and physical resources can pose another challenge for SI in CLM. While the literature and the data collected for this study show that one mission of SI is covering social needs that governments cannot meet, we argue that public administrations are still expected to provide financial support. Partnerships are a tool to ensure enough resources, which can be pooled through collaborative processes. Nevertheless, the absence of human resources is a barrier in the creation of such collaboration, as Gov2 highlights in this regard: “if we had the capacity to have somebody track it, and through emails, phone calls... we could be coordinated and work. I believe this is the main barrier that we encounter.” Additionally, our findings show that physical spaces to meet and discuss are also limited.

Finally, geographic dispersion can be observed as a challenge that is characteristic to the region. In CLM, 15% of the people live in 80% of the towns (JCCM, 2021), and many of these territories are affected by demographic decline. For the civil society and industry sectors, this becomes a challenge specially in the implementation phase, given that the nature of some initiatives requires physical presence. For example, a civil society participant referred to providing domiciliary care to people in need: “imagine that someone who offers domiciliary help, for instance, needs to travel between four towns that are 40, 50 and 60 kilometres away. You lose efficacy because you waste time travelling, and thus the assistance you offer is different.” Therefore, executing a project spanning multiple areas that are far from one another is a challenge, limiting the capacity to engage a broader part of the population.

The diversity of stakeholders is in itself a factor that creates new challenges. Our results suggest that there needs to be real commitment of all the involved actors and a clear distribution of accountability. Regarding communication, two concerns arise from the data. First, there is a need for more channels of communication enabling stakeholders to meet and discuss. Second, participants contend that there is a pattern of one-sided information, which fails to facilitate bilateral and constructive communication. An instance of this issue is reflected on this comment of Aca1: “if someone sends us an email here with some idea, we look at it, but it has to be them who come to us, it is not like engaging in a dialogue from which new topics can emerge.” This communication style is therefore seen as inadequate in fostering the type of exchange necessary for innovative ideas to surface.

The lack of trust has traditionally been considered a challenge for partnerships, and this is also the case for QH partnerships for SI. Our work argues that the absence of trust between civil society and governments is underscored in CLM, and it goes in both directions. Generally, civil society has lost trust in public institutions (the 2023 Edelman Trust Barometer shows that only 36% of Spanish citizens trust their governments). The absence of trust also appears in the opposite direction, as Civ3 indicates: “there are always intermediaries, I mean, communities are not trusted. In community processes, there always has to be either a public administration managing the money or a Local Action Group.” Governments, on their part, are focused on short-term goals, which is even more

emphasised for local governments. Aside from the different– sometimes incompatible – interests, our data display an underlying sentiment arising from civil society that they need to make an extra effort just to prove to public administrations that they are capable.

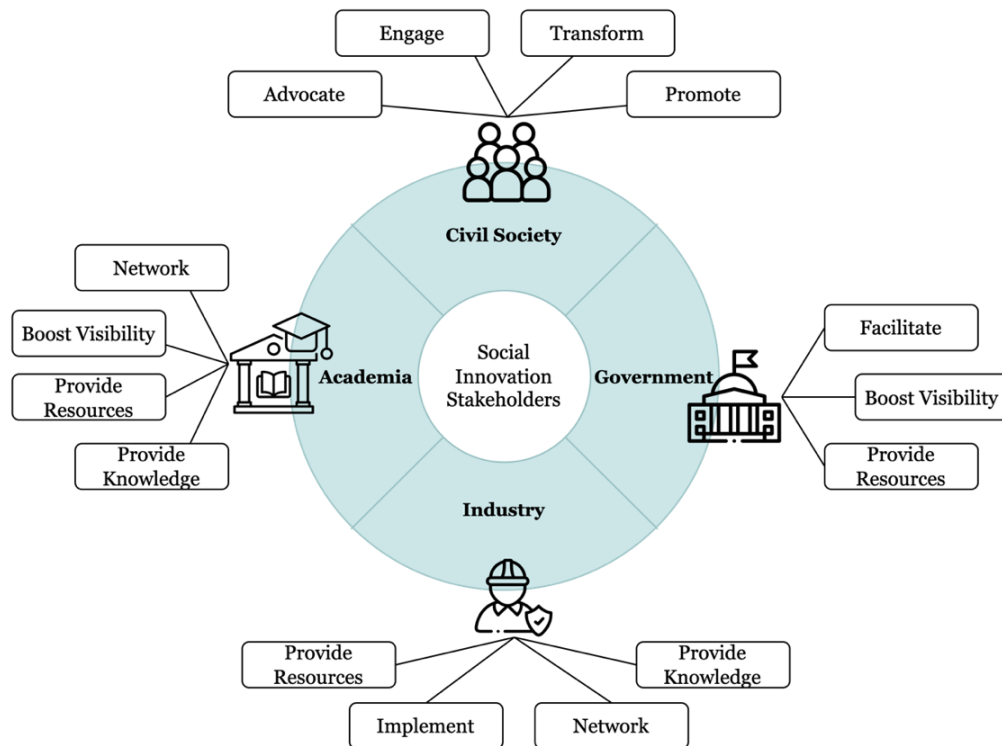
Table 4: Heatmap of code frequency in challenges. Source: Author’s own conceptualisation.

	Complexity of Process	Geographic Dispersion	Lack of Capacities	Inefficient Communication	Lack of Resources	Distrust
Academia	5	0	4	4	1	4
Government	6	0	4	3	5	9
Civil Society	10	5	12	9	6	4
Industry	6	1	3	2	5	5

The roles of Quadruple Helix actors

The evidence showed that every QH sector can play several roles for the promotion of SI in the region. The roles are presented in this section as displayed in Figure 2. We focus on a further description of the most predominant roles in our data.

Figure 2: Role distribution according to QH sectors. Source: Author's own conceptualisation.



According to our data, the government plays a pivotal role. There are two roles that are predominant both in the literature and the interviews. The first one is facilitator, a central role for ensuring that there is collaboration for SI. It involves creating the right environment for agents to interact and be encouraged to innovate. It is also about empowering citizens by helping them develop the necessary capacities and creating spaces (both physical and virtual) for actors to meet and discuss, with local public actors having a key role. Facilitating in the context of CLM also means advising the rest of the agents, as the evidence shows there is a lack of understanding of SI, as well as developing regional and local strategies that help all the agents work together for the same goals. Therefore, regulating and drafting policies to guide SI and QH partnerships are tasks included in the role of facilitator. The second-most assigned role is resource provider, mainly concerning financial support. In this regard, there seems to be a consensus among interview participants: public administrations should fund SI because they have more financial resources than the rest of the sectors. This might not be the case in other regions, but we have seen that innovation and R&D highly depend on public bodies in CLM.

The university, like the government, is expected to provide resources. As Gov2 explains: “here at the regional level, our fundamental agent of development is the University of Castilla-La Mancha.” Aside from funds, UCLM could offer meeting spaces, laboratories, offices, and other material resources. It can also act as a networker, since the institution can use all the connections it already has in place. But, most importantly, it is a knowledge provider: it provides research-based knowledge to assist in addressing social challenges and also in the form of advice or mentorship (as a consultant). The functions assigned to this institution also include teaching SI by embedding it in the curriculum and providing training for other stakeholders – an essential element in the context of capacity constraints in SI. Together with the government, universities can help boost the visibility of SI thanks to the large number of connections that they have in place.

The industry sector has been the least discussed in the interviews. That could mean that it is less integrated than the other actors in SI processes, though further research into how businesses are involved would be necessary to correctly interpret this result. Regardless, by far, the most emphasised role for this sector is implementer. This can be due to the belief that companies have the capacity to transform a vision into tangible results. Existing companies can take over this task, but at the same time, social enterprises can be created with that purpose in mind. Networker is another role that companies can play, specially by reinforcing connections with other firms and partnering with third sector entities. Social business models can also bridge civil society and public administrations by acting as mediators. Lastly, we argue that businesses can provide knowledge, which includes the expertise and experience of employees, but also offering training programmes, which could be done in collaboration with UCLM. The idea of a social entrepreneur as someone who realises “otherwise wasted potential” (Mulgan, 2012) is in line with our findings. The business sector has the potential to identify underutilised resources and leverage them through collaboration with other sectors. By doing so, they can tap into new sources of value and create mutually beneficial partnerships for SI.

We observe in our data that civil society is considered vital in SI. Furthermore, the different roles assigned to this sector are more evenly distributed. The two dominant roles, advocating and engaging, are generally facilitated by third sector organisations. It is also evident that their engagement to identify the root cause of problems is a valuable tool in

the diagnosis process. In addition, they can provide expert knowledge, as they have vast experience in working with social initiatives. In short, the role of engaging involves encouraging civil society to share their ideas and experiences. The advocate role is more related to mediating between different groups of civil society and the other sectors, including the facilitation of policies. The findings also show that civil society has a key role in promoting SI initiatives. This sector should aim to drive social changes and encourage the other sectors to participate in SI. We suggest that this role is most important in the first stages, that is, in identifying the problems and proposing preliminary solutions that can later be investigated. In the specific case of CLM, we argue that promoting SI also implies advancing and nurturing the idea of SI as an approach to regional challenges, and thus spreading the concept across the other sectors. Another crucial role is that of the change-maker, since the goal of SI is to bring about social transformations by forging new relationships. We contend that civil society must lead this change by championing new ideas and mobilising collective action. For that, as noted by Gov1, we need to go a step ahead:

I believe that the next step to take is to engage and to offer active participation, active presence. Not just to keep them informed about them (SI initiatives), but also that they can give their opinion, propose, decide, carry out joint programmes with the public administrations, even with the business sector, where they (civil society) provide their vision through their organisations.

We cannot expect to reach every single individual, but when a community reaches a critical mass, it has the potential to drive significant changes. By harnessing the power of social networks, communities can create lasting changes that shape attitudes and behaviours over time.

The motivations for social innovation

This section presents what motivates individuals from the QH sectors to be willing to collaborate for the sake of SI. What we have termed as process optimisation is the most recurrent idea across the interviews. It comprises aspects like the quality improvement of any given service, process or product that is being offered. In the context of SI, we argue

that it is closely related to the enhancement of public services. Partnerships provide a structure for the governance of SI, as demonstrated by Bellandi et al. (2021). In this regard, we suggest that the QH model provides a tool to work with new governance structures where power relationships are replaced by an egalitarian distribution. Processes are also optimised thanks to a reduction in costs, which can happen as a result of, first, saving resources by addressing real challenges from the start, and second, exchanging resources with other sectors. This is noted, for instance, by Ind1: “if you have a connection or contact with the people from the beginning, in one way or another, then you ensure that the needs you are solving are real.” Investing in social innovation has the potential to mitigate existing problems and stop new ones from arising, thereby saving resources and costs in the long run as well.

Another crucial motivation is knowledge sharing, which encompasses the relevant aspects of problem identification and definition. We contend that the diagnosis process is enhanced by having an interdisciplinary, intersectoral approach, but mostly by giving voice to the people. Sharing knowledge is also concerned with co-creation, an aspect at the core of SI as it promotes the generation of new ideas by integrating the knowledge and assets of involved actors. We conclude that collective intelligence is not only meaningful to cover knowledge gaps across groups, but also to ensure more inclusive solutions and avoid biases during the process, as noted by Gov1:

Well, I think that, in the exchange of experiences, one can achieve way more than with one single vision. And, of course, in every project, that exchange of experiences, as happens in the area of scientific literature, it is necessary: not only to correct deviations, opinions that might not be on the right, but also to enrich mutual growth.

Following this perspective of SI, the inclusion of civil society in governance structures is promoted and epistemic knowledge enhanced. As a result, we suggest that QH models boost inclusive innovation and epistemic diversity.

Another key motivation for seeking co-creation processes in SI is the belief that involving multiple sectors can generate a greater impact. The possibility to expand the impact of SI

initiatives increases thanks to the connections with other actors who are also motivated to transform society. At the same time, the sense of impact is an important element that helps empower the involved actors. As Ind1 indicates:

With a social innovation project, you want to positively influence society. Society comprises many things, many agents, and you, as an association or as a business or as the public administration will never be able to reach them all. And it's not enough for you to know their needs. Thus, by collaborating you reach further, be it further geographically or further with the goal you have.

Additionally, partnering with broader networks entails reaching more people, thus increasing the visibility of SI initiatives, which leads to more public awareness and potentially can attract more resources.

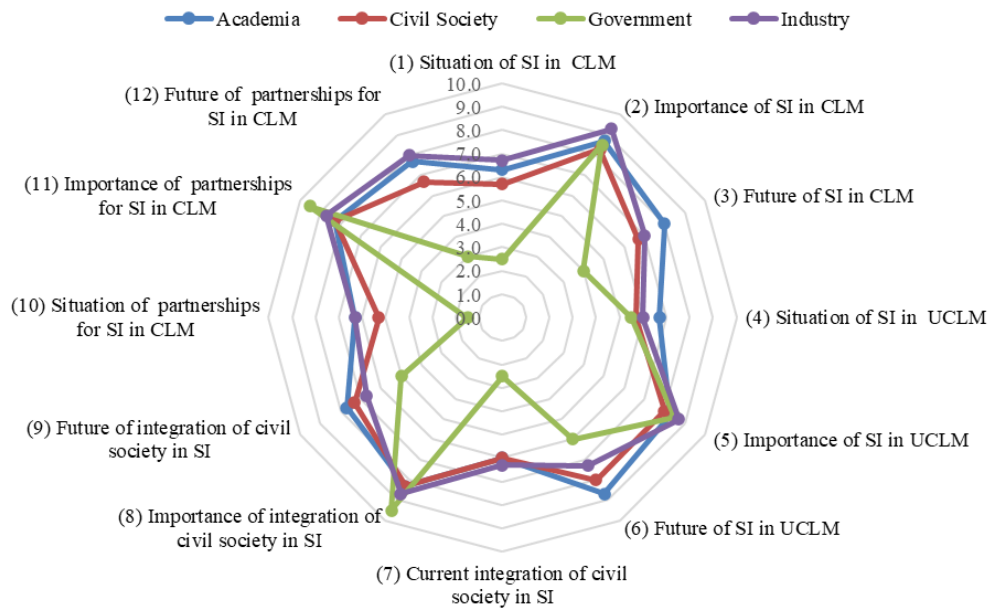
Lastly, we presume that driving social transformations is a crucial motivation for collaborating in SI. Previous literature argues that successful SI should produce systemic changes (Benneworth & Cunha, 2015; Moulaert et al., 2017; Moulaert et al., 2013). Our data suggest that such significant changes require partnerships that position civil society at the core of SI initiatives. In addition, the findings of this study demonstrate that the transformation that is driven by SI is understood as the advancement of constructive values and attitudes across citizens. Ind3 indicates in this regard: "my impact is very small for the scale of the world, but if each small enterprise could do a little, darn, we could improve a lot." It is also perceived as the process of dismantling societal barriers that impede the progress of marginalised groups. These transformations entail empowering people to give them the ability to address challenges in a systemic way.

Results of questionnaire

A short questionnaire was administered after each interview as a way to cross-check the data obtained in the interviews and further explore the current state of SI in CLM. While results cannot be interpreted as representative, they can help us verify the information obtained qualitatively and better interpret the perceptions of the participants. For the analysis, the answers were clustered according to the QH sector. The questionnaire covered four dimensions: SI in the region, SI in UCLM, the integration of civil society in

SI, and partnerships for SI. For each dimension, three parallel ratings were proposed (12 in total): its current state, its importance, and its future.

Figure 3: Radar chart of questionnaire answers. Source: Author’s own conceptualisation.



In order to offer an overview of the answers, Figure 3 presents a radar chart, where the average of each sector in each question is displayed. The 12 angular axes correspond to the 12 questions, while the radial axis displays the scale of 0 to 10 employed in the questionnaire. The answers (ratings) are plotted as a series of points along each axis, and then connected to show an overall representation of the perceptions by group. The chart reveals that academia, civil society, and industry present similar patterns in their ratings. We observe that the government stands out as the most critical when assessing the current situation of SI in the region, the current state of collaboration and the integration of civil society. In their assessment of the situation in 5 years from now, they see improvements in the integration of civil society, but they show scepticism towards QH partnerships for SI, even if they rate it as a highly important factor. In contrast, the rest of the sectors show optimism for the future of SI, and they anticipate that UCLM will advance towards a more important contribution to SI. Overall, the results of this questionnaire align with the qualitative data obtained.

Conclusion

This study argues that SI in CLM is still a nascent phenomenon, with many challenges ahead, but also with a potential for growth and expansion. Efforts and investment are imperative to unlock its full capacity, and we contend that QH partnerships are a pivotal condition for the success of SI initiatives. In this regard, it is evident from the data that individuals belonging to each of the four QH sectors are willing to collaborate and see partnerships as beneficial for SI and for the development of the region.

In this study, we adopted a regional approach which allowed us to delve deeper into the specific characteristics influencing the innovation ecosystem of CLM. Some of the factors that we can underscore include the presence of a single university in the region, which is in charge of most of the regional R&D in CLM. Another characteristic is the unique regional business landscape of CLM, largely made up of micro and small entities, which do not tend to innovate and rarely have R&D departments. As a result, the role of its regional public administration and its public university in science, technology and innovation is more relevant than in regions with a larger share of medium and big companies. These features are reflected in the collective discourse, where roles assigned to public institutions, comprising the regional and local governments as well as UCLM, are the most dominant across all sectors. This could also explain why the industry sector is not considered to currently have a role as relevant as the other three QH sectors. In relation to the role of civil society, our data has proven that all sectors are conscious of the need to include it right from the first stages of SI processes. At the same time, it has been acknowledged that, at the moment, there might not be enough mechanisms to do so. Therefore, the supporting infrastructure necessary to integrate civil society must be prioritised for the advancement of SI in CLM.

Our analysis suggest that the implementation of SI has proven to be challenging. In our case study, barriers regarding collaboration include an inefficient communication, as there appears to be an absence of meeting spaces and, more importantly, unfruitful dialogues based on unilateral information. Distrust is another element hindering collaboration, which is linked to the belief that stakeholders seek to pursue their own interests in partnerships. Building trust requires establishing efficient communication dynamics, so working on the first challenge could lead to overcoming the second one as

well. In more general terms, the results argue that limited resources, capacity constraints, and the complexity of the process are challenges facing SI in CLM. It is necessary to keep in mind that these barriers require a cultural shift in governance mechanisms, and thus long-term thinking, specially from policymakers. Efforts and investments need to be made in the present, often only to see results in the far future. Additionally, our analysis shows that the geographic dispersion of the region presents challenges in the implementation of SI. In this regard, we underscore the relevance of empowering citizens and ensuring that they are in a position to act as change-makers in their areas. This is the only way to guarantee that every municipality, far and remote as it might be, can take part in SI initiatives.

Finally, our data evidenced that QH partnerships have several advantages for the development of SI. First, SI processes are streamlined thanks to the expertise of the diversity of the involved agents. Second, precisely these differences in expertise and skills are beneficial for the generation of new ideas. Sharing knowledge leads to working with wider perspectives and this, when addressing complex social challenges, is essential to identifying and defining the problem. Third, the sheer number of people involved is advantageous, since it translates into a broader dissemination. As a result, the visibility of SI is boosted and that means that more people are aware of the concept and more initiatives are born. In short, partnerships lead to more impactful results of SI initiatives. Fourth, the commitment of all sectors, and especially of civil society, is necessary to generate social transformations. Partnerships are a tool to address societal challenges in a systemic way, because, in the end, SI aims at solving problems integrally.

Limitations and future research

This research is not without limitations. It is important to note that this study adopts a qualitative case study approach. This limits the ability to generalise findings to other settings. Therefore, the findings presented here are specific to the context of CLM and may not be representative of other regions. In addition, interviews are the principal data source of this thesis, with a relatively small sample size of 11 participants. While efforts were made to ensure that the sample was diverse, some perspectives were not fully captured. Additionally, in the thematic analysis, only one coder has been involved, which might have introduced subjectivity into the analysis.

There are important avenues for future research that could advance SI studies. Comparative studies that underscore the differences between regions that a priori present similar characteristics could help develop our understanding of the elements that lead to successful SI. As we have underscored in this work, SI cannot be simply relocated because of its highly contextual nature, which relies on local knowledge and resources, and more importantly on local communities. Therefore, understanding how contextual differences can shape the roles and relationships between sectors would cast some light on the conditions that make it successful. At the same time, this would provide important insights on how SI can be scaled up by adapting initiatives to the context.

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Appendix

Questionnaire about social innovation in Castilla-La Mancha

- 1) In general, about social innovation in Castilla-La Mancha, please assess:
 - a. the current status of social innovation. (0 – not developed at all; 10 – fully developed)
 - b. the importance of social innovation. (0 – not important at all; 10 – extremely important)
 - c. how developed social innovation will be in 5 years (0 – not developed at all; 10 – fully developed)
- 2) Regarding social innovation in the University of Castilla-La Mancha, please assess:
 - a. the current status of social innovation (0 – not developed at all; 10 – fully developed)
 - b. the importance of social innovation (0 – not important at all; 10 – extremely important)
 - c. how developed social innovation will be in 5 years (0 – not developed at all; 10 – fully developed)
- 3) Regarding participation of civil society in social innovation in CLM, please assess:
 - a. the current status of participation in social innovation (0 – not developed at all; 10 – fully developed)
 - b. the importance of participation in social innovation (0 – not important at all; 10 – extremely important)
 - c. how developed participation in social innovation will be in 5 years (0 – not developed at all; 10 – fully developed)
- 4) Regarding partnerships for social innovation in CLM, please assess:
 - a. the current status of collaboration for social innovation (between government, university, industry and civil society). (0 – not developed at all; 10 – fully developed)
 - b. the importance of collaboration for social innovation (0 – not important at all; 10 – extremely important)
 - c. how developed collaboration for social innovation will be in 5 years (0 – not developed at all; 10 – fully developed)