

## Open Social Innovation: A New Paradigm for Thriving Social Organizations (Case of Public Health Organizations)

Rachid Oumlil<sup>1</sup>, Jamal Laziz<sup>2</sup>, Noura Karim<sup>3</sup>, Mustapha Bengrich<sup>4</sup>

<sup>1</sup>Full Professor, MADIALOG Laboratory, ENCG-Agadir, University Ibn Zohr, Agadir – Morocco; ACSIC research group, UIB, Palma de Mallorca, Spain

<sup>2</sup>PhD student, MADIALOG Laboratory, ENCG-Agadir, University Ibn Zohr, Agadir – Morocco

<sup>3</sup>PhD student, FSJES Agadir, University Ibn Zohr, Agadir – Morocco

<sup>4</sup>Full Professor, FSJES Agadir, University Ibn Zohr, Agadir – Morocco

### ABSTRACT

Up today, the impacts of the COVID-19 pandemic on social organizations are still unexplored. Several innovation efforts were made from both of the academicians and the professionals to understand these impacts and to solve the issues generated by this pandemic. However, these efforts are with no interesting results caused by adoption of the social innovation practices inappropriate to the post pandemic situation.

Public health organizations are part of the social organizations impacted by the COVID-19 pandemic. They were faced to diverse issues owing in several times their inability to satisfy all demands. Hence the need for the new innovation practices to beat the potential consequences of this pandemic. Open Social Innovation (OSI) as a new paradigm of innovation turns out to be an alternative mode of innovation to thrive these organization during the post pandemic period.

The primary goal of this communication would be identifying opportunities that OSI affords to public healthcare organizations, then categorizing them following many criteria. As the research on OSI devoted to health is still in a primary stage, authors noted the quasi absence of the studies on the impacts of this mode of innovation.

To do, authors referred to articles underlining the general benefits of open innovation during the last decade (Oumlil et al., 2020) and used articles displaying the relevant benefits of social innovation for the period ranging from 1980 to April 2023. Afterwards, a meta-analysis of the selected papers was conducted using IRaMuTeQ 0.7 alpha 2 software. Results highlight eleven interrelated categories of OSI opportunities for the public health organizations: hospital performance; hospital innovation process; hospital environment; health products and services; health knowledge and cooperation; patient; health problem alleviation; hospital resilience and sustainability; hospital competitiveness and governance; well-being and social responsibility; and hospital risk management.

**Keywords:** open social innovation, public health organization, social organization, social innovation, systematic literature review, benefits

### INTRODUCTION

Unlike any crisis before, the COVID-19 pandemic affected people's lives and organizations' conduct. Since its beginning in 2019, millions of people have been devastated by its health, its economic and its social implications (Kuckertz et al., 2020) and engendered apparent societal inequalities (Corak, 2020). COVID-19 turns all organizations upside down, bringing them into a gloomy environment with unexpected challenges. Social organizations did not escape from such impact. Several Non-Profit Organizations (NPO) have suspended their activities due to their extreme financial pressure or even to the classical design of their governance. Even if the impacts of the COVID-19 outbreak are still unexplored for social

organizations, Kirsten et al. (2020) pointed out three main impacts ranging from: financial performance, environmental opportunities and threats, and resilience strategies.

Public health organizations, as social organizations, were fundamentally impacted by the COVID-19 pandemic. They were unable to provide their services and financially squeezed because of the decrease of their demand. To combat such consequences, these organizations should co-work together and strengthen their collaboration to create robust synergies (Barhate et al., 2021).

Innovation is considered the main tool to develop post-crisis alternatives. Several health organizations transformed their practices and their business process to become more resilient. However, their efforts at transformation were not enough to develop innovative and adequate tools to face the post-COVID-19 challenges and to increase their resilience. This could be explained by the fact of adopting the traditional paradigm of innovation to develop these practices.

Open innovation gathered relevant practices fighting against COVID-19 (Chesbrough, 2020; Vermicelli et al., 2020). It is defined as “*a distributed innovation process involving purposive knowledge flows across organizational boundaries for monetary or non-monetary reasons*” (Chesbrough & Bogers, 2014). Open innovation seems then to be important paradigm of innovation offering a suitable environment where to develop adequate practices for the post COVID-19 outbreak. However, this paradigm showed its relevance for benefits organizations only.

For social organizations, open social innovation (OSI) practices sound to be the most appropriate practice for the public health organizations to enhance their resilience and to face the post-COVID-19 outbreak challenges. It exposes collaborative relationships between actors of different nature with social purpose. It is defined as “*the application of either inbound or outbound open innovation strategies, along with innovations in the associated business model of the organization, to social challenges*” (Chesbrough & Di Minin, 2014).

To prove this supposition, the authors endeavored to address the main research question as follows: What are the opportunities and benefits that open social innovation offers to social organizations, surprisingly, health organizations?

To answer this question, the remainder of this communication is structured as the following: we start by a literature review highlighting OI, social innovation and OSI concepts. Afterwards, we present the adopted methodology and shed light on the main results regarding the opportunities of the Open Social for public health organizations, then we conclude.

## LITERATURE REVIEW

It is widely acknowledged that innovation is the most important factor for organizations to improve their resilience and overcome challenges. Over time, organizations, especially profit-oriented ones, relied on their innovations' research and development capabilities to generate and develop new ideas. In the sense of Chesbrough (2006), ideas are generated in-house, and the only way to market them is through the originating company. Hence, the innovation is conducted through a vertical integration innovation model, also known as the closed innovation paradigm. However, the mutation of the innovation arena in terms of the mobility of skills, the use of ideas, and the emergency of the venture capital market appeal to the new form of innovation under the name of "open innovation".

Open innovation is a distributed process of innovation based on knowledge flows across organizational boundaries, mobilizing both monetary and non-monetary mechanisms to fit the adopted business model (Chesbrough & Bogers, 2014). Otherwise, unlike closed innovation based on internal resources only, in the open innovation context, the organization boundaries become porous and allow collaboration with external actors (Chesbrough, 2003).

OI is based on outbound and inbound mechanisms (Chesbrough & Crowther, 2006). The first one denotes internal usage of external sources of knowledge and innovation. As for the second one, outbound, it refers to making available internal sources for partners (Dahlander & Gann, 2010).

Lately, researches have advanced the adequacy of OI in the social sector since openness can help satisfy social needs and promote social innovation (Tardivo et al., 2017). Chesbrough and Bogers (2014) showed the possibility of extending OI business models to social organizations. In 2014, Chesbrough and Di Minin applied the OI paradigm to promote innovation in government agencies and independent not-for-profit organizations. Moreover, Chesbrough (2020) considered OI to be the most important to find solutions to the COVID-19 crisis and to create and capture value for social organizations. However, social organizations, especially public health organizations, are still adopting classical social innovation practices to face their challenges.

Social innovation (SI) remains an ambiguous concept that has taken many forms. It is recognized as a process that is specifically developed towards the third sector. It is distinct from institutionalized social practices and social inventions that emerge from technological advancements. In recent times, social innovation has witnessed a growing application in the development of products, processes, and services facilitated by technologies or closely linked to technological innovations to produce benefits having social impact. The review of the different definitions of SI has led to the emergence of two notable conceptualizations (Van Der Have & Rubalcaba, 2016). The first one, seen as the sociological approach, considers SI as new social practices created from collective, intentional, and goal-oriented actions to bring about social change (Cajaiba-Santana, 2014). The second one, considered as the economic approach, focuses on the impacts and views SI as a practice to ameliorate the quantity and/or quality of life (Pol & Ville, 2009).

Combining OI and SI gives birth to the neologism "open social innovation (OSI). This latter is defined as the application of either inbound or outbound open innovation strategies, along with innovations in the associated business model of the organization, to social challenges (Chesbrough & Di Minin, 2014). It implies collaboration in an "open source" manner (Murray et al., 2009). It includes the incorporation of outside knowledge as well as using problem solutions from other domains (Chalmers, 2013), and will foster new social relationships or collaborations (Caulier-Grice et al., 2012). OSI differs from social innovation in that it employs collaborative structures and practices to address social issues. Functionally, OSI is seen as an open combination between technology and society (Yun, 2015). It also provides access to external knowledge and skills, allowing communities, corporations, and users to collaborate effectively (Rayna & Striukova, 2019).

OSI is then a new paradigm of social innovation that helps to develop innovative social business models and allows access and dissemination of purposeful social knowledge to generate positive economic, social, and environmental impacts. It seems to be the most appropriate practice for public health organizations to develop their processes and generate value. However, until now, research exploring opportunities of OSI for these organizations are understudied. Hence, in the following section, we will explain our methodology to identify opportunities of OSI for social organizations, mainly the public health ones.

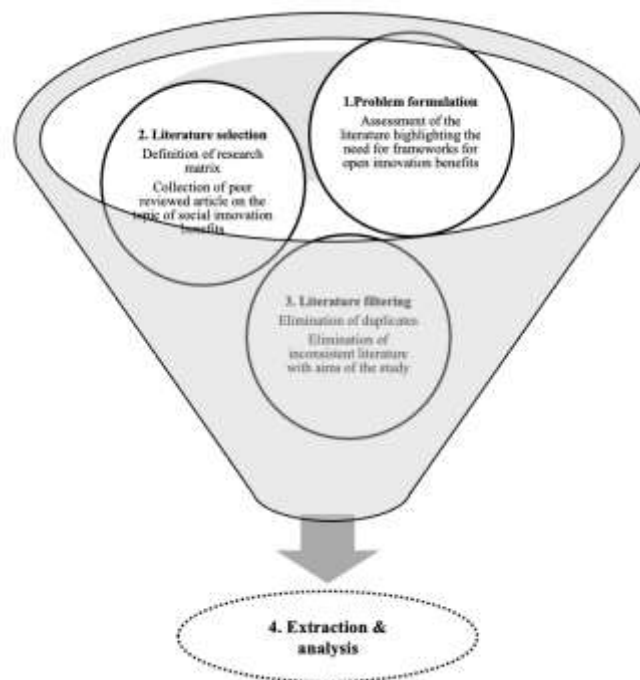
## METHODOLOGY

This communication aims to identify the opportunities offered by open social innovation to public health organizations. To achieve this goal, we move forward in three major steps:

- The first one relates to social innovation's opportunities and benefits;

- The second one refers to the recent work of Oumlil et al. (2020) underlining the general benefits of open innovation during the last decade;
- The last one suggests a framework that summarizes OSI opportunities for health public organizations.

We initially identified articles within the field of social Innovation and specifically focused on those examining the benefits of social innovation across different contexts. Subsequently, we removed duplicate articles and eliminated any inconsistent article that did not align with the aims of our study. Through this process, we extracted and analyze the benefits and the opportunities, showcasing the diverse positive outcomes that social innovation brings to organizations (Figure 1).



**Figure 1. Framework methodology**

To identify the social innovation opportunities and benefits, authors conducted a systematic literature review on the contribution of this innovation to social organizations. For this, authors collected relevant publications mobilizing Scopus engine by using the following Matrix TITLE-ABS-KEY ( ( "social innovation" AND "benefit" ) OR ( "social innovation" AND "impact" ) OR ( "social innovation" AND "advantage" ) OR ( "social innovation" AND "opportunity" ) OR ( "social innovation" AND "value" ) OR ( "social innovation" AND "performance" ) )

The initial search yielded more than 2736 articles. Our sample contains only articles written in English and published in peer-reviewed journals whose impact factor is listed in the Journal Citation Report (JCR), and the sample excludes event annals, book chapters, conference papers and books. The time period covered by this research spans almost four decades: from 1980 to April 2023. Subsequently, we refined the research matrix by specifying "articles" as the sole item under investigation, leading to a reduction in the number of items to 711 articles.

TITLE-ABS-KEY ( ( "social innovation" AND "benefit" ) OR ( "social innovation" AND "impact" ) OR ( "social innovation" AND "advantage" ) OR ( "social innovation" AND "opportunity" ) OR ( "social innovation" AND "value" ) OR ( "social innovation" AND "performance" ) ) AND ( LIMIT-TO ( SUBJAREA , "SOCI" ) OR LIMIT-TO ( SUBJAREA

, "BUSI" ) OR LIMIT-TO ( SUBJAREA , "ECON" ) OR LIMIT-TO ( SUBJAREA , "DECI" ) ) AND ( LIMIT-TO ( PUBSTAGE , "final" ) ) AND ( LIMIT-TO ( DOCTYPE , "ar" ) ) AND ( LIMIT-TO ( EXACTKEYWORD , "Social Innovation" ) OR LIMIT-TO ( EXACTKEYWORD , "Social Innovations" ) ) AND ( LIMIT-TO ( LANGUAGE , "English" ))

Afterwards, we used the Mendeley program to import and arrange the pertinent gather papers, to exclude items simultaneously present in various databases to confirm the accuracy of the data. We further did a thorough screening of the titles, abstracts, and keywords to determine their relevance to our study, leading to a significant reduction of papers.

By employing a series of screenings, we successfully narrowed down the items included this study. These screenings were guided by a predefined set of inclusion and exclusion criteria. Simultaneously applied to the studies, these criteria ensured the inclusion of studies specifically related to the field of social innovation (Table 1).

**Table 1. Inclusion and exclusion criteria**

Inclusion criteria	Exclusion criteria
Peer-reviewed papers full paper	Unindexed sources
The study clearly indicating the benefits of social innovation	Items other than journal articles
Study focusses on social innovation	Not within the field of social innovation
Period 1980 - 2023	Non-English
	Duplicate study
	Grey literature

After retrieving the titles and abstracts of the chosen articles, we made a manual selection in order to define our final sample with 510 articles, build our corpus, and then proceeded to a textual analysis using the software IRAMUTEQ 0.7 Alpha2 (Ratinaud, 2009), performing 3 types of analysis: 1- Word cloud, 2- Hierarchical descending classification (DHC), the Reinert method and 3- Similarity analysis

To gain deeper insights into social innovation (SI) benefits and opportunities, we employed several distinct types of analysis. We started by the word cloud as a valuable tool in identifying relevant words. However, it did not provide sufficient indications for a comprehensive understanding. Consequently, we conducted a thematic analysis to uncover common themes within the literature on SI and the value it brings. We complete our analysis with the top-down hierarchical clustering (DHC), the Reinert method, with the objective of classifying text segments based on the transcription and vocabulary, and generating clusters of similar words and visualizing them in a dendrogram of classes.

## RESEARCH RESULTS

### Results of the Bibliometric Analysis

In this section, we will conduct the bibliometric analyses to provide a roadmap on the relevant benefits and opportunities of the social innovation. These results will facilitate the identification of current research focus areas and potential research topics of Social Innovation benefits. In addition, we will conduct a qualitative analysis to delve into the literature findings and uncover relevant groups and perspectives.

#### *Evolution of publications*

The scientific community's interest in a particular topic can be gauged by the number of publications per year. Examining the temporal distribution of published articles provides insights into the trend and evolution of the social innovation benefits and opportunities topic

over time. Figure 2 illustrates the temporal distribution of the 711 articles. Notably, there has been a substantial rise in the number of articles focused on the benefits and opportunities of social innovation, particularly since the beginning of the last decade in 2010. This upward trend indicates the growing attention and research dedicated to exploring this topic.

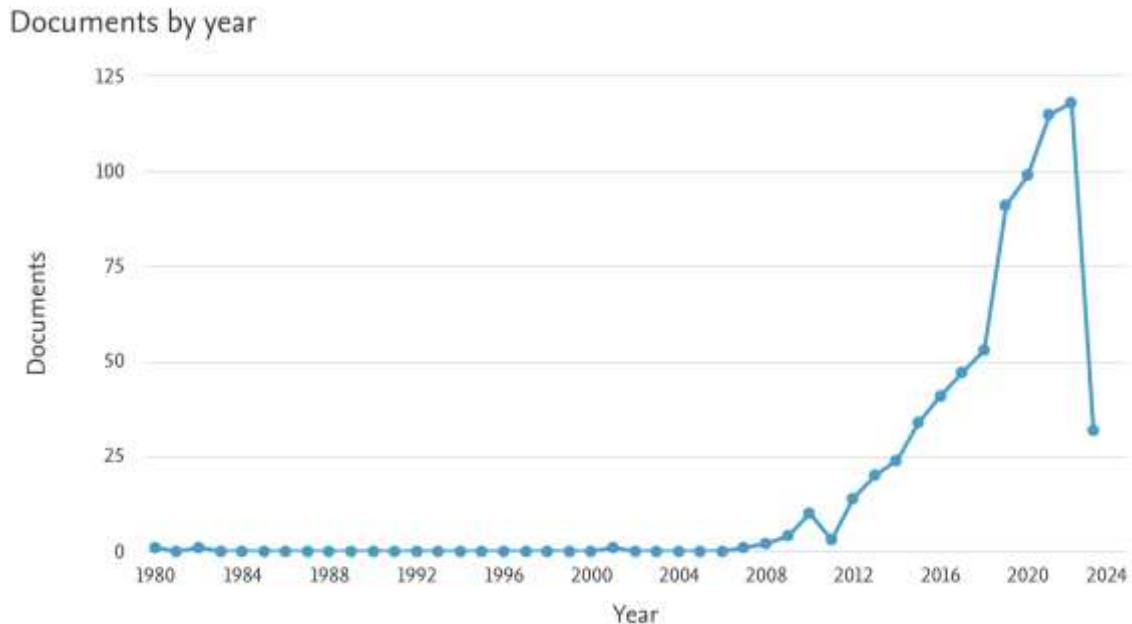


Figure 2. Evolution of publications

*Distribution of SI benefits papers*

The analysis of the geographical distribution of papers by countries reveals that social innovation benefits are extensively explored in several European countries, including the United Kingdom, Italy, Spain, and Germany, as well as in the USA and Canada. Moreover, this issue has started to spread to other emerging countries such as the BRICS nations and select Asia-Pacific countries (refer to Figure 3).

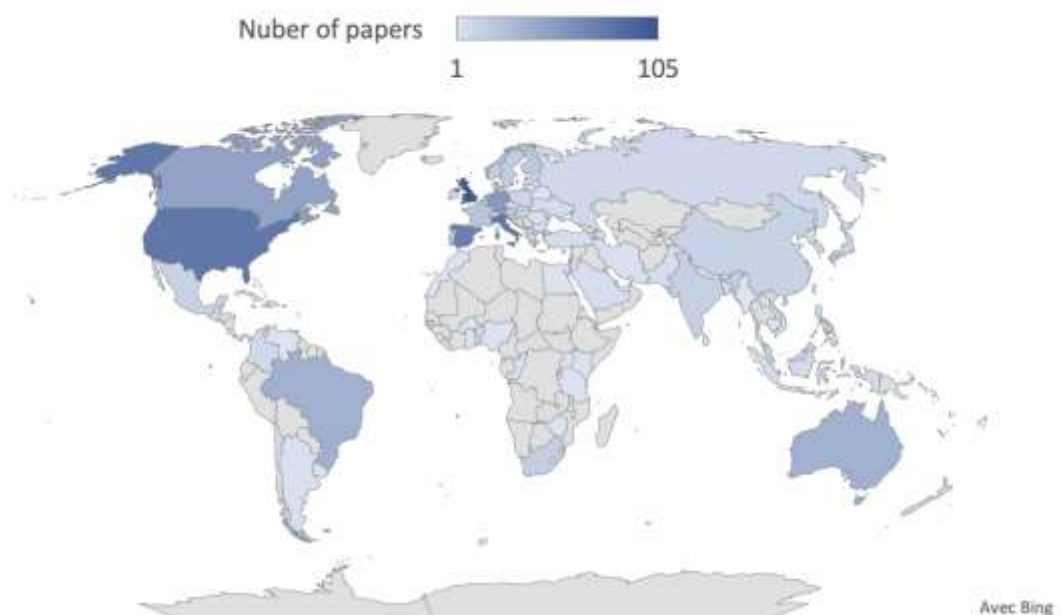


Figure 3. Worldwide distribution of SI benefits papers

## Results Qualitative Analysis

In addition to the general findings presented in the previous section concerning the evolution of publications and their distribution across countries, we conducted a textual analysis using IRAMUTEQ 0.7 Alpha2 software to gain a comprehensive understanding of our results and identify benefits of social innovation. The analysis encompassed three types of analysis: 1) Word cloud, 2) Hierarchical Descending Classification (DHC) using the Reinert method, and 3) Similarity analysis. These analytical approaches provided further insights into the key themes, classification patterns, and similarities within the corpus of social innovation research.

The utilization of IRAMUTEQ 0.7 software enabled the application of the word cloud technique, which visually presented a cluster of words highlighting the prevailing advantages associated with the following terms: (1) Social development (2) Sustainability (3) Governance (4) Performance (5) Social Responsibility (6) Well-being (7) Societal & environment (8) Inclusion (Figure 4).



**Figure 4. Word cloud generated by IRAMUTEQ**

Although the word cloud proves useful in identifying significant words within our sample, it falls short in providing sufficient insights into the categories of benefits and opportunities. Hence, to uncover the recurring themes in the literature on SI benefits and opportunities, we undertook a thematic analysis. To complete our analysis, we conducted the Descending Hierarchical Classification (DHC) technique within the IRAMUTEQ software, specifically utilizing the Reinert method (Reinert, 1983). This method enables the classification of text segments based on transcription and vocabulary. Descending Hierarchical Classification facilitates the generation of clusters that consist of words sharing similar characteristics, and presented in a class dendrogram. This visual representation allows for the identification of words with high frequency percentages. Figure 5 exhibits six distinct classes, each characterized by specific word groups:

- The first class incorporates the following words: Ecosystem, social, problem, environment, economic, employability, vulnerability, dynamic, growth;
- The second class comprises the terms: share, reform, foster, learn capacity,

innovative, sustain, resilience

- The third class contains of the words: Increase, process, enhance, governance, collaboration, competitiveness, inclusive, community
- The fourth class encompasses: Life, knowledge, cooperation, stakeholders, improve, costs, chain
- The fifth class consists the words: Well- being, scalability, engagement, involvement, responsibility, challenge
- The last (sixth) is composed of innovation market, financial, action, income, risk, value, solution, performance

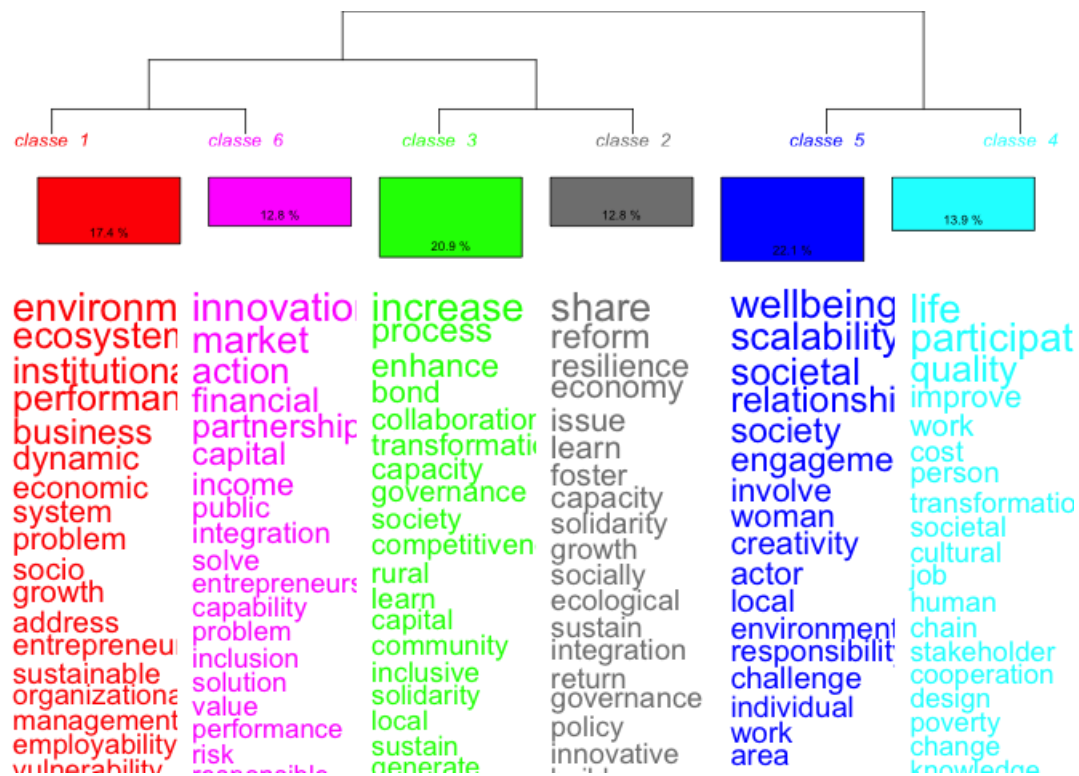


Figure 5. Class dendrogram of SI benefits and opportunities

The DHC method offered initial insights for classifying SI benefits and opportunities. However, a detailed examination of each class necessitates further refinement. To accomplish this, we conducted a similarities analysis using the IRAMUTEQ software. This analysis will visually represent the structure of SI benefits and opportunities, as well as the connections between them, specifically highlighting word co-occurrences. The outcomes of the similarity analysis unveil a diagram with six overarching groups: (1) Social, economic and environmental alleviations, and (2) Innovativeness, resilience and sustainability, (3) Governance, competitiveness and inclusion, (4) Knowledge, human capital and, (5) Cooperation, well-being, engagement and social responsibility and (6) Business performance and risk management (refer to Figure 6).

(1) *Social, economic and environmental alleviations*: refer to the eradication or mitigation of social, economic and environmental problems. Social alleviations involve addressing problems including poverty, inequality, discrimination, social exclusion, access to healthcare and education, as well as enhancing the general wellbeing and standard of living for people in both communities and as individuals. As for economic problem alleviations, they entail actions that promote economic growth, open up job opportunities, boost



productivity, lower unemployment and poverty rates, encourage fair trade, support entrepreneurship, and catalyze sustainable economic development. Concerning the environmental problem alleviations, they refer to actions and policies that mitigate or address environmental problems while fostering environmental sustainability. Achieving this may entail addressing issues like climate change, deforestation, habitat destruction, resource depletion, waste management, conservation of natural resources, promotion of renewable energy, and sustainable use of ecosystems.

(2) **Innovativeness, resilience and sustainability:** Innovativeness in the sense of being ability to develop novel solutions and approaches to address challenges, create value, and drive positive change. As for Resilience, it refers to the capacity to withstand from shocks and disturbance. It encompasses the capability to anticipate, prepare for, respond to, and recover from various challenges (social, economic, environmental) in order to preserve well-being. Concerning sustainability, it denotes the pursuit of economic development, social progress, and environmental protection in a balanced and integrated manner.

(3) **Governance, competitiveness and inclusion:** Governance in the sense of the structures that guide the decision-making, accountability, and overall management of social organizations. It involves responsibilities and transparent and effective decision-making mechanisms. As for competitiveness, it refers to the ability to deliver services effectively and efficiently while remaining relevant and responsive to the needs of stakeholders. Concerning inclusion, it explains the intentional efforts to ensure the equitable participation, representation, and engagement of all individuals and communities.

(4) **Knowledge, human capital:** Knowledge refers to the collective understanding, expertise, information, and insights possessed by actors inside the organization. As for human capital, it denotes, collective skills, capabilities, knowledge, experience, and attributes these actors.

(5) **Cooperation, well-being, engagement and social responsibility:** Cooperation explains the act of working together, collaborating, and sharing resources and expertise among individuals and organizations. It concerns partnerships, alliances, and networks to leverage collective strengths and resources towards common goals. As for, it refers to creating environments, programs, and services that support the holistic well-being of individuals and communities. The physical, mental, emotional, and social aspects of individuals' quality of life. Engagement refers to the active involvement, participation, and empowerment of individuals and stakeholders. Concerning social responsibility, it presents the ethical and moral obligation to act in ways that benefit society as a whole.

(6) **Business performance and risk management:** Business performance refers to the assessment and measurement of the effectiveness and efficiency of social organization's operations and activities in terms of delivering high-quality services, allocating resources effectively, and achieving missions with efficiency and effectiveness. As for risk management, it involves identifying, assessing, and mitigating potential risks and uncertainties that may impact social organization's ability to achieve its objectives.

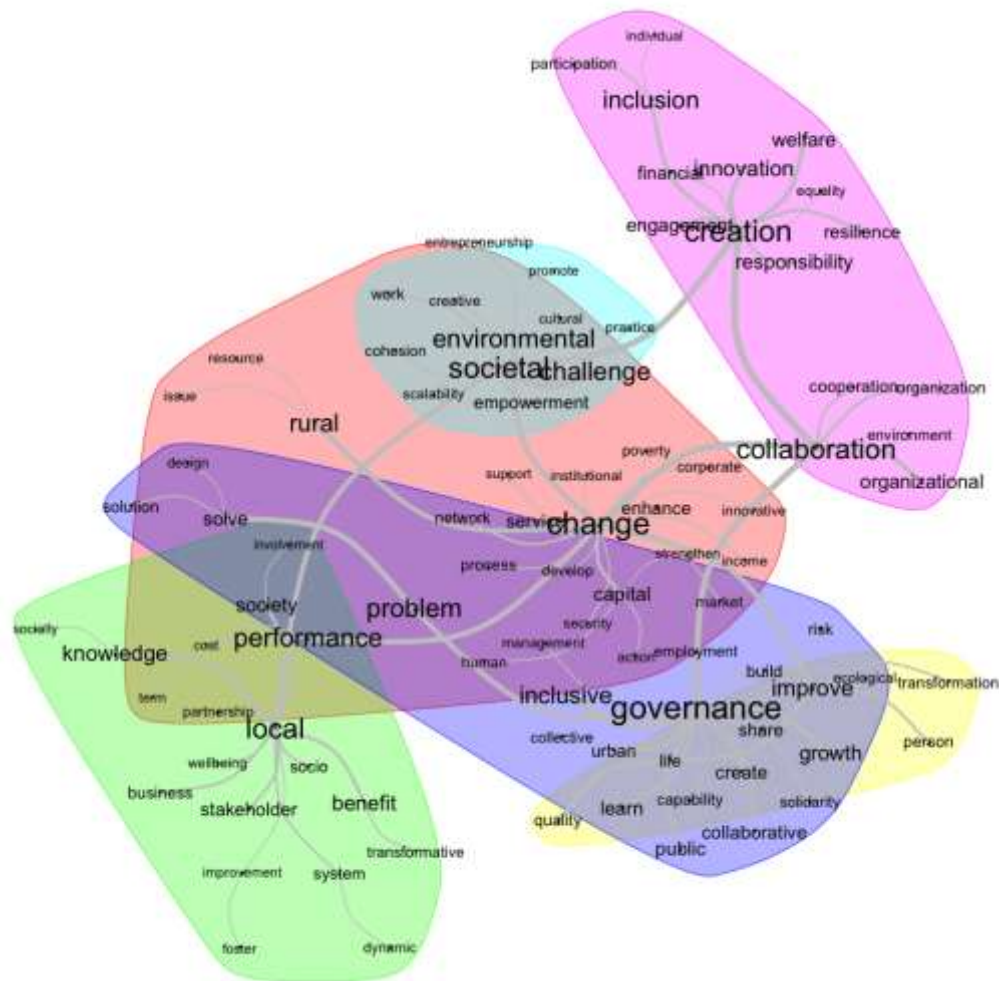


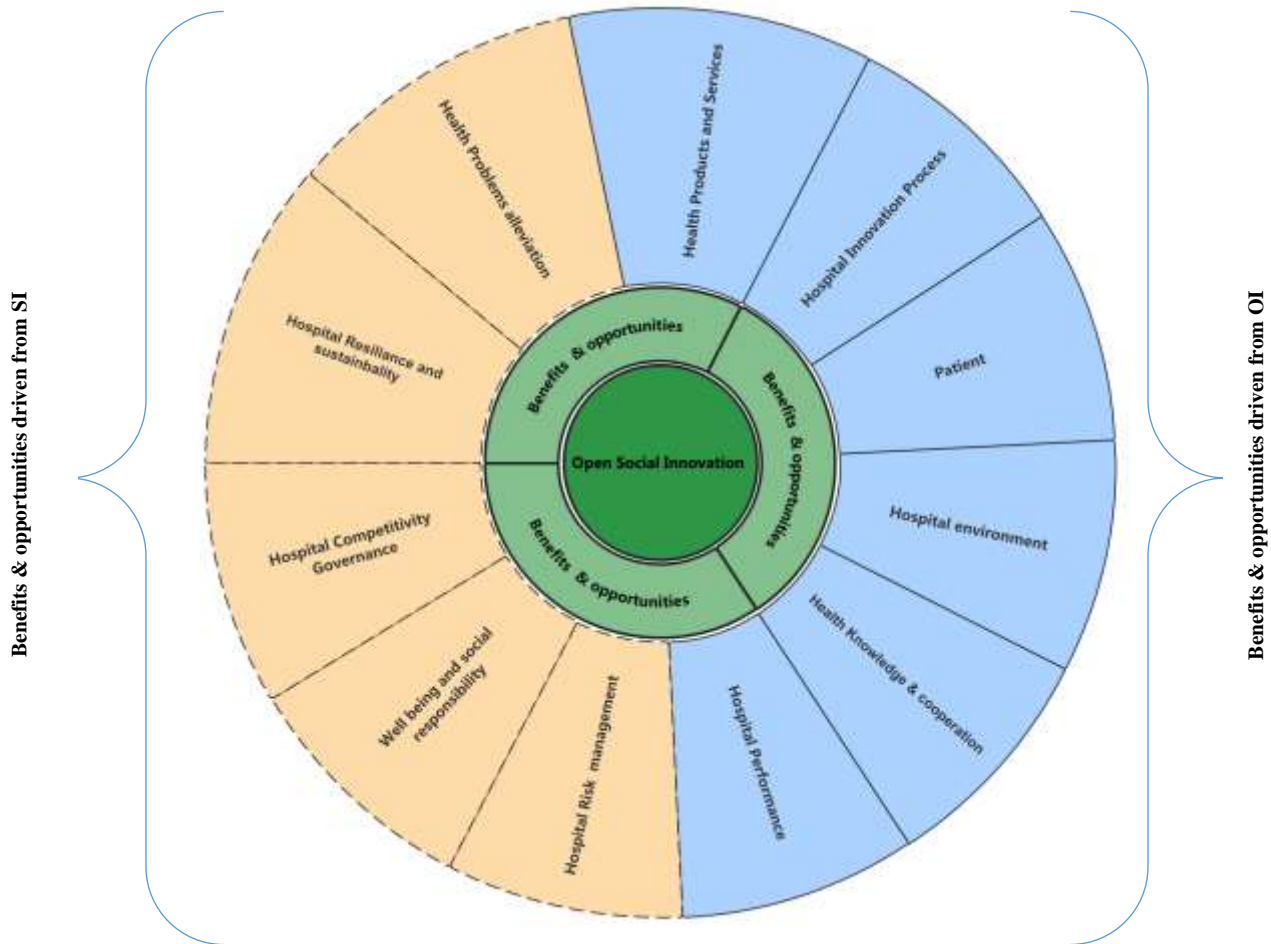
Figure 6. Similarities analysis

The lack of a framework addressing opportunities and benefits of open social innovation for public health organization proved advantageous for our research. Hence, categorization stands as a noteworthy contribution within this communication, as it strives to establish constructs pertaining to these benefits and opportunities.

After identifying SI benefits and opportunities, authors combine them with those of OI benefits to create a new framework that will shape OSI benefits and opportunities for public health organizations. Concerning OI benefits, the authors referred to a recent framework developed by Oumlil et al. (2020). By examining OI innovation benefits since the advent of the OI paradigm in 2003, Oumlil and his colleagues developed a framework and a measurement tool for assessing the benefits of OI, which includes six key elements: (1) performance, (2) innovation process, (3) market, (4) product and service, (5) knowledge, and (6) customer.

From social innovation, authors mobilized the six categories of benefits and opportunities driven from the literature: (1) social, economic, and environmental alleviations; (2) Innovativeness, resilience, and sustainability; (3) governance, competitiveness, and inclusion; (4) knowledge and human capital; (5), cooperation, well-being, engagement, and social responsibility; and (6) business performance and risk management (refer to Figure 6). As open social innovation is seen as an approach that combines the principles of open innovation and social innovation, we combined and adapted the twelve categories driven by open innovation and social innovation to propose a framework with eleven benefits and opportunities of open social innovation for public health organizations : (1) hospital

performance; (2) hospital innovation process; (3) hospital environment; (4) health product and service; (5) health knowledge and cooperation; (6) patient; (7) health problem alleviation; (8) hospital resilience and sustainability; (9) hospital competitiveness and governance; (10) well-being and social responsibility; and (11) hospital risk management (Figure 7).



**Figure 7. Open social innovation benefits & opportunities framework for health public organizations**

### CONCLUSION

In this communication, we provide a comprehensive review of the research that explores OSI benefits and opportunities for public health organizations. For this purpose, we identified and categorized social innovation's opportunities and benefits, then referred to the recent work of Oumlil et al. (2020), which underlined the general benefits of open innovation during the last decade, to propose a framework governing OSI opportunities for health public organizations.

The contribution of this communication has several implications on both the managerial and theoretical levels. For managers, the OSI benefits and opportunities framework will potentially help health managers, innovation health managers, and policymakers adopt OSI practices within their organizations. It could be considered a useful basis for managers to evaluate OSI practices within public health organizations. It embraces eleven relevant categories of benefits and opportunities: (1) hospital performance; (2) hospital innovation process; (3) hospital environment; (4) health product and service; (5) health knowledge and

cooperation; (6) patient; (7) health problem alleviation; (8) hospital resilience and sustainability; (9) hospital competitiveness and governance; (10) well-being and social responsibility; and (11) hospital risk management. Nevertheless, it is crucial to acknowledge that the benefits and opportunities of OSI adapt and align with the trends in innovation. By embracing emerging trends, OSI can continue to foster creativity, collaboration, and value creation, driving resilience, sustained growth, and competitive advantage for public health organizations.

Concerning the theoretical implications, this communication could be considered a basis for embracing useful constructs to develop models of OSI benefits and opportunities devoted to social organizations. However, achieving this level of refinement requires a significant amount of fine-tuning adaptation and exploratory studies.

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