

The Impact of Regulation on Social Innovation in Sustainable Development

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Abstract

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Regulation plays a strategic and multidimensional role in guiding, shaping, and strengthening social innovation within the broader context of sustainable development. When designed with clarity, adaptability, and inclusiveness, regulatory frameworks and public policies can stimulate the adoption of innovations that are environmentally responsible, socially inclusive, and economically viable. Such frameworks create the conditions for creativity, experimentation, and cross-sector collaboration, enabling solutions that address the interconnected social, economic, and environmental challenges of the present era. In contrast, rigid, overly prescriptive, or fragmented regulations can obstruct these processes by limiting flexibility, discouraging experimentation, and slowing the pace of change. This literature-based study synthesizes international research findings to map the relationships between regulatory structures, the capacity for social innovation, and progress towards sustainable development goals. The review reveals that adaptive, participatory, evidence based, and goal-oriented regulations are central to fostering multi-stakeholder cooperation, enhancing public trust, legitimizing innovative practices, and accelerating systemic transformation toward long-term and holistic sustainability.

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1. Introduction

Regulation is one of the policy instruments that has a significant influence on the process of social innovation within the framework of sustainable development. In this context, regulation not only functions as a control mechanism but also as a catalyst that encourages the creation of a conducive environment for the development of creative solutions to address social, economic, and environmental challenges. Social innovation itself refers to the development of new ideas, services, or models that aim to meet social needs in a way that is more effective, efficient, sustainable, and inclusive than existing solutions. The relationship between regulation and social innovation is becoming increasingly relevant given the complexity of global challenges such as climate change, social inequality, and the degradation of natural resources. Sustainable development requires the integration of economic growth, social equity, and environmental preservation.

In practice, social innovation can act as a bridge connecting these three pillars through community based approaches, multi stakeholder collaboration, and the utilization of appropriate technology. However, the successful implementation of social innovation is inseparable from the regulatory framework that governs the movements of actors. Adaptive regulation can provide space for social experiments, facilitate cross sector partnerships, and reduce administrative barriers that hinder the innovation process. The challenges that arise include the adjustment of regulation to technological developments, the integration of various stakeholders' interests, and ensuring that the resulting policies are inclusive and non-discriminatory. In addition,

the success of regulation in supporting social innovation is also influenced by the quality of governance.

Regulation that is drafted in a participatory, evidence based manner and has clear evaluation mechanisms tends to be more effective in encouraging sustainable social innovation.¹ This aligns with the idea that public policy processes should not only be top down but also involve bottom up initiatives to ensure relevance and acceptance at the local level. This collaborative approach allows for synergy between social innovators, government, the private sector, and civil society. Literature shows that there are a number of factors that determine the successful integration of regulation and social innovation, including: the level of openness of the regulation to renewal, the existence of incentives for innovators, ease of access to resources, and the existence of cross sector collaboration platforms.

Regulation that is designed to facilitate collaboration among actors tends to be more effective in generating innovations with widespread impact.² This is especially important in the context of sustainable development, which requires cross-sector and disciplinary coordination. However, there are also obstacles that often arise in the interaction between regulation and social innovation. These obstacles include complex bureaucracy, limited institutional capacity, and policy uncertainty that reduces the interest of investors or strategic partners to get involved.³ These

¹ Peter Milley , Barbara Szijarto, Kate Svensson, and J. Bradley Cousins, "The evaluation of social innovation: A review and integration of the current empirical knowledge base," *Evaluation* 24, no. 2 (2018): 247.

² Yochai Benkler, "Law, innovation, and collaboration in networked economy and society," *Annual Review of Law and Social Science* 13, no. 1 (2017): 243.

³ Suborna Barua, "Financing sustainable development goals: A review of challenges and mitigation strategies," *Business Strategy & Development* 3, no. 3 (2020): 285.

obstacles show the importance of regulatory reform efforts aimed at supporting a healthier social innovation ecosystem. An adaptive regulatory approach, which accommodates continuous experimentation and learning, becomes one of the keys to overcoming these challenges. Thus, this research aims to examine the impact of regulation on social innovation in the context of sustainable development through a literature study method. The focus of the study is directed at identifying the characteristics of regulation that can encourage or hinder social innovation, as well as formulating relevant policy implications to strengthen the contribution of social innovation to achieving sustainable development goals.

2. Literature Review

The literature review on the relationship between regulation, social innovation, and sustainable development shows a mutually influential connection. Social innovation, which is generally defined as the development of new ideas and solutions to solve social problems effectively, is often influenced by the prevailing regulatory framework. Regulation can act as a facilitator or a barrier, depending on the extent to which it provides support for experimentation, learning, and the adoption of new solutions. Recent studies highlight the importance of adaptive regulation, where policies are designed to adjust to the dynamics of technological, social, and environmental changes. For example, principle based regulation is considered more flexible than regulation that is too detailed and prescriptive.

This approach provides space for innovators to develop creative solutions while still ensuring the achievement of public goals such as safety, quality, and fair

access. In addition to flexibility, regulatory incentives are also an important factor in encouraging social innovation. Policies that provide fiscal incentives, ease of procedures, or support for access to resources can increase the capacity of social innovators to test and scale their solutions.⁴ These incentives serve not only as a motivational driver but also as a signal that the government and policymakers recognize and support the role of social innovation in sustainable development. Cross-sector collaboration is another important element that is often facilitated through regulation. Studies show that the existence of formal collaboration platforms regulated by public policy can bring together various actors from government, the private sector, non-profit organizations, to local communities to design and implement more comprehensive solutions.⁵ Regulation that governs and encourages this collaboration usually results in innovations with a wider reach and higher sustainability. However, the literature also highlights the existence of regulatory barriers that often become an obstacle to social innovation. These obstacles can take the form of excessive bureaucracy, overlapping rules, lack of coordination between agencies, and legal uncertainty.

These barriers can slow down the innovation process, reduce the attractiveness of investment, and limit the adoption of new solutions. Therefore, regulatory reform is an important issue in the sustainable development agenda. From a sustainable development perspective, social innovation facilitated by adaptive

⁴ Lerzan Aksoy, Linda Alkire, Sunmee Choi, Peter Beomcheol Kim, and Lu Zhang, "Social innovation in service: a conceptual framework and research agenda," *Journal of Service Management* 30, no. 3 (2019): 437.

⁵ Robert P Van der Have and Luis Rubalcaba, "Social innovation research: An emerging area of innovation studies?," *Research policy* 45, no. 9 (2016): 1932.

regulation can accelerate the achievement of goals such as poverty reduction, improved quality of life, and environmental preservation. A study by Krlev et al.⁶ shows that social innovation that is integrated into public policy through appropriate regulation can significantly increase the effectiveness of development programs. Overall, the literature underscores that regulation has a strategic role in shaping the social innovation ecosystem. The right regulation not only minimizes risks but also maximizes opportunities for innovation to grow and make a real contribution to social, economic, and environmental sustainability.

3. Methods

This study uses a literature review method to examine the impact of regulation on social innovation in the context of sustainable development. A literature study was chosen because it provides a comprehensive analytical framework for previous research, thus allowing researchers to identify patterns, trends, and knowledge gaps on the topic being studied. Data sources were obtained from scientific publications indexed in Google Scholar, Elsevier, Researchgate, with a focus on national/international journal articles published between 2016 and 2021. The selection of this time frame is intended to ensure the relevance and timeliness of the data, given the rapidly changing dynamics of regulation and social innovation during that period. The keywords used in the search included “regulation and social innovation,” “policy impact on sustainable development innovation,” and “adaptive

⁶ Gorgi Krlev, Georg Mildemberger and Helmut K. Anheier, "Innovation and societal transformation what changes when the 'social' comes in?, " *International Review of Applied Economics* 34, no. 5 (2020): 533.

regulation in social innovation.” Articles included in this study must meet the inclusion criteria, namely focusing on the relationship between regulation and social innovation, explaining the connection with aspects of sustainable development, containing clear empirical findings or conceptual reviews, and being published in reputable international journals.

Articles that were irrelevant, opinion-based without empirical foundation, or did not go through a peer review process were excluded from the analysis. The analysis process was carried out in several stages. The first stage was article collection, where the initial search results produced. After filtering based on titles and abstracts, articles were selected for in depth review. The next stage was thematic classification, where articles were categorized into main themes such as regulation as a facilitator of social innovation, regulation as a barrier to social innovation, and the role of adaptive regulation in sustainable development. Then a literature synthesis was carried out, where the findings from each article were summarized and compared to find consistent patterns and differences. This synthesis was carried out narratively by paying attention to the relationships between concepts and their relevance to the sustainable development framework. To maintain validity, only articles published in journals with a rigorous peer review process and relevant citations were used. Reliability was maintained through consistent source documentation and data coding, as well as by comparing interpretations between articles to reduce subjective bias. With this approach, the research was able to identify not only the positive and negative impacts of regulation on social innovation

but also the factors that strengthen or weaken the role of regulation in promoting sustainable development goals.

4. Results

4.1. Regulation as a Driver of Social Innovation

Based on the literature analysis, there is a strong consensus that regulation designed in an adaptive manner has great potential to act as a major driver of social innovation. This adaptive regulation is characterized by flexibility in its application, an emphasis on achieving goals rather than just procedural compliance, and openness to social experiments designed to solve complex and multidimensional problems. This flexibility allows for adjustment to the continuously changing social and economic dynamics, so that regulation does not become a barrier but rather a platform that facilitates the birth of new solutions.

A number of studies confirm that principle-based regulation is proven to be more effective in facilitating social innovation than rigid and prescriptive rule-based regulation. This principle-based approach provides wider room for maneuver for innovators to develop creative solutions, while still maintaining minimum standards that guarantee safety, transparency, and accountability.⁷ Thus, regulation is no longer seen merely as a set of constraints but as a framework that provides direction as well as opportunities for responsible social experimentation. In addition to the aspect of flexibility, regulation also plays an important role in facilitating cross-sector

⁷ Bruno S Silvestre and Diana Mihaela Țîrcă, "Innovations for sustainable development: Moving toward a sustainable future, " *Journal of cleaner production* 208 (2019): 329.

collaboration, which is a key element in the development of sustainable social innovation. The literature study shows that regulations governing the formation of public-private partnerships, research consortiums, or multi-stakeholder forums can open up channels for the exchange of knowledge, resources, and experience that accelerate the process of developing and diffusing innovation.⁸

This collaboration not only enriches the ideas and technologies used but also helps ensure that innovation has support from various layers of society and different sectors. Regulation can also be used as an instrument for providing incentives, both in fiscal and non-fiscal forms. Fiscal incentives, such as tax exemptions, subsidies, or financial support for social innovation projects, have been proven to increase the capacity of organizations to conduct research, trials, and replication of successful solutions. On the other hand, non-fiscal incentives such as simplification of administrative procedures, accelerated licensing, or priority access to public facilities also play a role in speeding up the innovation development process, especially for small-scale but high-potential initiatives.

Another relevant finding is that regulation that integrates the principles of sustainable development into the planning and implementation of social projects can create a double effect. It not only strengthens the success of the innovation technically and operationally but also ensures its contribution to social, economic, and environmental goals simultaneously.⁹ This integration encourages the creation

⁸ Robert P Van der Have and Luis Rubalcaba, "Social innovation research: An emerging area of innovation studies?," *Research policy* 45, no. 9 (2016): 1932.

⁹ Gorgi Krlev, Georg Mildenberger and Helmut K. Anheier, "Innovation and societal transformation what changes when the 'social' comes in?," *International Review of Applied Economics* 34, no. 5 (2020): 533.

of innovations that are not only effective in solving problems but also sustainable in the long term. The positive impact of adaptive regulation is also seen in the increase in the legitimacy of social innovation in the public eye. When an innovation receives formal recognition through regulation, the level of public trust tends to increase. This trust becomes an important social capital that can expand public participation, increase the adoption of innovation, and strengthen support from various parties. In general, the literature shows that regulation designed with a goal orientation, adequate flexibility, incentive support, and cross sector collaboration mechanisms can be a significant catalyst in driving social innovation towards a more sustainable direction. With this approach, regulation functions not only as a control tool but also as an engine for social transformation that is in line with the goals of sustainable development.

4.2. Regulation as a Barrier to Social Innovation

On the other hand, there is strong evidence in the literature that inappropriate regulation can actually become a serious barrier to the development of social innovation, especially when the regulations are not designed with the needs and dynamics on the ground in mind. These barriers arise in various forms, ranging from excessive bureaucracy, legal uncertainty, to overlapping rules between agencies that create administrative complexity. All of these factors have the potential to reduce the effectiveness of social innovation and hinder its contribution to achieving

sustainable development goals.¹⁰ Research shows that complex bureaucracy often slows down the licensing process, hinders field experiments, and limits the ability of organizations to adapt to changing community needs.¹¹ In the context of social innovation, which often requires a high degree of speed and flexibility, these bureaucratic barriers become a significant obstacle. In many cases, long and layered administrative requirements cause social innovators to lose momentum, especially when they operate with limited human and financial resources.

Delays in obtaining permits or approvals can mean losing the opportunity to implement solutions at the time they are most needed. Regulatory uncertainty is also an equally significant hindering factor. When regulations change frequently or their interpretations differ among officials and related agencies, organizations find it difficult to formulate solid long-term plans. This condition not only increases operational risk but also reduces attractiveness for potential funding partners, as investors and donors tend to avoid projects that operate within an unstable legal framework. In addition, regulation that is too prescriptive and detailed often limits the space for innovation. Rules that are formulated with rigid procedural details can hinder the application of new methods or technologies that may be more effective, because innovators are tied to following certain predetermined steps. This approach limits the opportunity to experiment, try alternative approaches, or adjust strategies

¹⁰ Eugenia Rosca, Jack Reedy and Julia C. Bendul, "Does frugal innovation enable sustainable development? A systematic literature review," *The European Journal of Development Research* 30, no. 1 (2018): 146.

¹¹ Frances Westley, Nino Antadze, Darcy J. Riddell, Kirsten Robinson, and Sean Geobey, "Five configurations for scaling up social innovation: Case examples of nonprofit organizations from Canada," *The Journal of Applied Behavioral Science* 50, no. 3 (2014): 247.

to unique local conditions.¹² Some studies also highlight the problem of coordination between agencies as a significant structural barrier.

When there is no harmonization or alignment of regulations at the policy level, social innovators are often faced with different, even contradictory, requirements from various agencies. This situation not only slows down the implementation process but also increases administrative costs which ultimately divert resources from core innovation activities to unproductive compliance activities.¹³ Another no less important factor is the lack of stakeholder involvement, especially the social innovation actors themselves, in the process of formulating regulation. When regulation is drafted top down without considering the perspectives and practical experiences of those directly involved on the ground, it is highly likely that the regulations will not be in line with real needs. As a result, regulation not only fails to provide the expected support but can even become a barrier to the development of society. These barriers underscore the importance of a careful, flexible, and evidence based regulatory design, as well as an inclusive and participatory implementation process. Without improvements in these aspects, regulation has the great potential to become a barrier, not a driver, for social innovation. The impact is a stagnation of progress towards sustainable development goals, which in turn can slow down efforts to overcome increasingly complex social, economic, and environmental challenges.

¹² Lerzan Aksoy, Linda Alkire, Sunmee Choi, Peter Beomcheol Kim, and Lu Zhang, "Social innovation in service: a conceptual framework and research agenda," *Journal of Service Management* 30, no. 3 (2019): 437.

¹³ Robert P Van der Have and Luis Rubalcaba, "Social innovation research: An emerging area of innovation studies?," *Research policy* 45, no. 9 (2016): 1932.

5. Discussion

The results of this literature review clearly confirm that regulation has a complex dual role in influencing social innovation in the context of sustainable development, namely as both a driver and a barrier. This role is highly dependent on how the regulation is designed, implemented, and the extent to which its adaptability to the social, economic, and environmental dynamics that are constantly changing.¹⁴ The right regulation can be a catalyst for innovation, while the wrong regulation can actually hinder the development of new ideas needed to face global challenges. On the positive side, regulation that is flexible, principle-based, and designed to encourage cross sector collaboration is proven to be able to accelerate the development of social innovation. This kind of regulation provides ample space for social experimentation, facilitates the exchange of knowledge, and provides incentives that encourage the involvement of actors from various sectors.¹⁵

This is in line with the concept of innovation friendly regulation, where public policy not only functions as a mere regulatory instrument but also as a facilitator of a dynamic and inclusive innovation ecosystem .¹⁶ However, the literature findings also reveal that without careful planning, effective coordination, and active participation from stakeholders, regulation can actually turn into a significant barrier.

¹⁴ Rand Askar, Luís Bragança, and Helena Gervásio, "Adaptability of buildings: a critical review on the concept evolution," *Applied sciences* 11, no. 10 (2021): 12.

¹⁵ Annica Kronsell and Dalia Mukhtar-Landgren, "Experimental governance: The role of municipalities in urban living labs," *European planning studies* 26, no. 5 (2018): 1002.

¹⁶ Bruno S Silvestre and Diana Mihaela Țîrcă, "Innovations for sustainable development: Moving toward a sustainable future," *Journal of cleaner production* 208 (2019): 329.

Excessive bureaucracy, overlapping rules between agencies, and legal uncertainty not only slow down the innovation development process but can also weaken the sustainability of the solutions produced. In this context, regulation that is too prescriptive and rigid often fails to adapt to technological developments, the emergence of innovative social business models, or the dynamic changes in community needs. This discussion also affirms the importance of an inclusive and participatory regulation formulation process. The direct involvement of social innovators, civil society, academics, and the private sector in the policy-making process can ensure that the resulting regulation is in line with the reality on the ground. The co-creation of regulation approach allows for the creation of policies that are more adaptive, relevant, and have the ability to anticipate future challenges.¹⁷

From a sustainable development perspective, the role of regulation is not only to govern the mechanisms for implementing social innovation but also to ensure that the innovation provides balanced benefits in social, economic, and environmental aspects. Without regulation that comprehensively integrates sustainability principles, there is a risk that social innovation will only have a short-term impact or ignore certain dimensions of sustainability. Therefore, the main challenge going forward is the ability of policymakers to find the right balance between control and freedom to innovate, so that effective regulation can combine legal certainty with operational flexibility, accommodate social experimentation, and ensure the real contribution of innovation to sustainable development goals.

¹⁷ Tingting Zhang, Can Lu, Edwin Torres and Cihan Cobanoglu, "Value co-creation and technological progression: a critical review," *European Business Review* 32, no. 4 (2020): 691.

6. Conclusion

This literature study reveals that regulation holds a strategic role in influencing the direction and success of social innovation in sustainable development. Regulation that is designed adaptively, is principle-based, and accommodates cross-sector collaboration can function as a catalyst that accelerates the innovation process. This kind of approach provides flexibility for innovators to develop creative solutions while maintaining accountability and alignment with sustainability goals. Conversely, regulation that is rigid, overlapping, and has minimal stakeholder participation can actually hinder social innovation. The obstacles that arise, such as excessive bureaucracy and legal uncertainty, can weaken the power of innovation, reduce the attractiveness for funding partners, and slow down the implementation of solutions needed by the community. Therefore, the main challenge for policymakers is to balance the need for legal certainty and the freedom to experiment. An inclusive, transparent, and data-driven policy formulation process is key to creating regulation that not only governs but also facilitates the creation of relevant and sustainable social innovation. With the right approach, regulation can become a transformative driver for achieving sustainable development goals, ensuring that the social innovation produced is able to provide sustainable, equitable, and inclusive benefits.

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