

Article

Detecting Circular Economy Strategies in the Fourth Sector: Overview of the Chilean Construction Sector as Evidence of a Sustainable Business Model

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Abstract: An essential part of the economic and social system is the existence of sustainable companies worldwide. Despite the fact that the literature has described different kinds of innovations, organizations, and models regarding this topic, there is a need to understand the dynamics that occur within the fourth sector and how strategies and practices are working. In this study, construction companies presenting sustainable projects are identified, and the way in which they serve the community, stakeholders, and consumers is analyzed. The present article presents an epistemological search to recognize the best practices and strategies, which allows an understanding of the new circular economy strategies in the fourth sector. The authors show a conceptual approach regarding these actions and a methodology on the most notable techniques of the Circular Economic Strategy of Chile based on an investigation of documentary and comparative data. Data collection considered perceptions of construction practices regarding the circular economy and the specificity of each situation and reflected the actual production systems. We used simple random sampling to collect data in the scope of the study. The findings show the importance of some relational elements between companies that structure construction projects, supporting the impact of discovering specific variables in the different layers of sustainable management. In addition, results show how those responsible for construction projects understand sustainability as a preference, amplify the role of various factors in the work of the cultural and social ecosystems under consideration. Finally, this article details and analyzes the channeling of innovative business models in the fourth sector.

Keywords: Chile; construction; environment; business model; sustainability; fourth sector; circular economy



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1. Introduction

Recently, the orientation of traditional industries towards sustainable companies with social, cultural, and environmental dimensions, such as architecture, construction, or design, has been broadly recognized. In addition, sustainability is a decisive factor for differentiation regarding community challenges and policies. Moreover, the opportunity for sustainable companies to increase earnings and revenues, raise their benefits, and guide their models towards environmental actions has led to reinforcing a customer-focused orientation to make these kinds of organizations attractive to stakeholders and society [1,2].

The fourth sector is characterized by different characteristics separating it from the public sector, the private sector, and the non-profit sector. Regarding the fourth sector,

two defining components are a principal responsibility for environmental and social purposes and a significant earned-income business model [1,3]. Other relevant dimensions refer to ownership rights among stakeholders following their contributions, governance, environmental and social responsibility, and transparency (i.e., performance assessed and reported to stakeholders) [1,4]. Similar to the public sector and non-profit institutions, for-benefit companies pursue a broad range of primary objectives in an environmental and social sense. In this sense, the fourth sector can be defined as a set of organizations at the intersection of the public, private, and social sectors [3]. This new sector combines the social and environmental aims of the public and nonprofit sectors with market-based approaches of the private sector; for example, the fourth sector is characterized by organizations such as municipal enterprises, sustainable companies, mission-driven businesses, cooperatives, or hybrid organizations.

Sustainable companies operate in all three sectors regarding iconic and realistic representations. Moreover, they support structures available to the for-profit sector, non-profit organizations, and public sector [4,5], serving the community, stakeholders, and residents in a community [1,3]. Furthermore, sustainable companies mean industries that preserve the environment, including tangible and intangible cultures. Notably, construction has ultimately received broad private and public support in terms of diverse aspects; for example, the relevance related to the construction of famous buildings, the purpose of enhancing legacy, and its potential to generate shared value and economic development [6,7].

Despite some aspects in formulating strategies, the most relevant considerations of sustainable companies are focused on reducing expenses and costs and, at the same time, facilitating sustainability [5,7–11]. Moreover, recently in Latin America, stakeholders' satisfaction as a primary principle is showing significant interest. In this sense, innovation in the building and construction sector and environmental and cultural businesses beginning to immerse in the fourth sector represent a relevant value source [1,2,6]. For this reason, the rationale for this research, which deals with the importance of strategic processes and operational systems that influence the performance of this type of firm, is based on focusing on the business processes of the creative, environmental, and cultural industries oriented to stakeholder experiences [12,13].

However, while the environmental field focuses on this fourth sector, more is needed to know how sustainable companies operate; consequently, more research is necessary [14,15]. According to several authors, sustainability in construction projects must be set from an integrative approach to meet the perceptions of different stakeholders and groups in the economic, environmental, and social dimensions [16–20]. From a financial perspective, sustainability offers various benefits; that is, profitable business, efficient operational procedures, significant value proposition, and a lower cost of exchange of information [21]. This fact is essential for construction projects, as competition is increasing according to sustainable management. Additionally, the social consideration that affects all economic sectors is focused on the client's experience and how sustainability improves by improving traditional business models. Moreover, this phenomenon is a resource to create additional, differentiated value, integrating several environmental technologies into organizational, corporate, and institutional practices.

In the fourth sector, academic literature has detected different attributes of this type of innovation regarding typologies and classifications of models, the chances and difficulties that these typologies and models demand to handle, or their impact. Moreover, there is still the challenge for more academic work to describe the broad range of categories and practices and how they interact with the underlying forces within ecosystems of the fourth sector [2,10]. For example, in [21], the authors evaluated new business models regarding sustainable companies in the fourth sector.

In this paper, we aim to evidence a comparative framework related to sustainable companies in the construction industry. This work seeks to understand how sustainable companies operate in the fourth sector. The contribution of this paper is to address the variety and density of a range of initiatives. The article's ultimate contribution analyzes

the facilitation and advancement of practices in the fourth sector. In consequence, it describes how circular ecosystems work in the construction sector. From this perspective, this paper presents a theoretical framework built around the fourth sector and environment literature review. The work explores several kinds of initiatives by using a mixed strategy combining documentary analysis, a range of interviews with participants and experts, and participatory observation. The intention is to reveal if initiatives present similar features, but also, to describe a diverse set of strategies, which may be complementary to our approach followed in this analysis. Additionally, we intend to illustrate the critical aspects of some contextual features that regulate and facilitate (e.g., alliances or relationships) circular ecosystems in the construction industry. Notably, the specific objective is twofold: (1) to describe a range of management practices to implement in sustainable companies, and (2) to evidence the relationship between perceptions and the development of environmental strategies and practices in these companies. Based on a business model perspective in the construction industry, this study explores how sustainable businesses provide a context for understanding organizational innovation in the fourth sector in terms of the evaluation of the dimensions of the new business models with a focus on the construction industry in Chile, describing a framework for addressing sustainable practices of the fourth sector.

While innovative business models regarding the fourth sector are an essential field recently evidenced [21], regional and subregions phenomena are still open to research. An integrative perspective on this phenomenon demands more information and detailed analysis. Consequently, the purpose of this paper is to investigate whether organizational, social, and economic features are related to the relevance of the fourth sector in the construction industry's sustainable companies [22–24] and to evidence the diversity of perspectives regarding this consideration among different places in Latin America and the Caribbean (LAC).

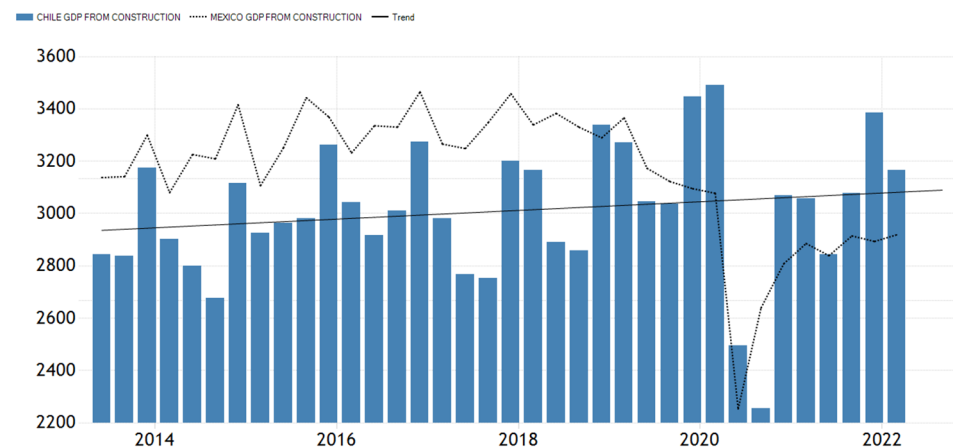
As for Chile, construction is one of the most critical industries of the national economy. The multiplier effect in other economic sectors evidences the construction sector's relevance. Moreover, the construction industry demands input and generates many jobs by reactivating the economy in the medium and long term and by contributing to greater competitiveness of the countries. In addition, the construction sector shows a massive countercyclical behavior; that is, in recessive periods, the state orients their reactivation instruments towards construction, such as public infrastructure and social housing. Some construction-related indicators are used as references for activity projections worldwide (see Scheme 1 regarding the gross domestic product growth rate in Chile from construction versus national in comparative terms, GDP percentages by year).



Scheme 1. The gross domestic product (GDP) in Chile (construction vs. national). Source: own elaboration, adapted from [23].

Leading up to the COVID-19 pandemic, the construction industry constituted 6.4% of the gross domestic product (GDP), beating the OECD average level (5.2%) but lower than the LAC level (7.3%). By 2018, 8.5% of those employed in the country worked in the construction industry [22].

This sector's contribution has varied in the last few years. Mainly due to the global health emergency, the effects of the mandatory quarantines and social distancing measures imposed by the Chilean State have contributed to the unprecedented drop of -14.1% annually as of the second quarter of 2020. This macroeconomic scenario is consistent with investment depletion in construction, which has paralyzed housing projects and put works on hold for different periods. However, these figures started to improve in 2022, especially regarding the recovery of private investment, since, generally, the Chilean State invested in construction 28.9% more than in previous years [23]. This item's relevance is such that the country, motivated by the international context, initiated sustainability strategies for the construction industry. In the first decade of the 21st century, sustainability strategies were mainly linked to energy and the environment, creating the Design Guide for energy efficiency in social housing, the Country Program for Energy Efficiency in 2005, and the Ministry of Energy in 2010 [25]. Only in the second decade of this century did the State take its first steps to implement a policy aimed at sustainable construction. According to several authors, most scholars focused their studies on sustainability in the construction industry on the opportunity for reinforcing corporate strategies as a section of the sustainable agenda for LAC [21]. As an alternative vision, this manuscript refers to an integrative perspective describing the context of construction projects in LAC and Chile [26]. This perspective can be considered a general agenda and an opportunity for describing the projects proposed in the territory. For example, in comparative terms, Scheme 2 shows the relevance of the construction sector in Chile and Mexico as OECD members (GDP in USD billions): the trend is positive in Chile compared to the slightly negative trend for Mexico from 2014 to 2022 (including the pandemic period).



Scheme 2. The gross domestic product (GDP) from construction (Chile vs. Mexico). Source: [23] and own elaboration.

In this paper, we intend to offer an overview for drawing some aspects reached on the fourth sector in sustainable companies in Latin America, particularly in Chile. The research we carried out refers to adopting new business models in the industry. Nevertheless, it mainly draws on the literature regarding the Fourth Sector Development Initiative (FSDI) to advance holistic, sustainable growth to achieve the Global Goals for Sustainable Development by 2030. Therefore, in the present article, the authors hypothesized that those building new business models of construction projects belonging to the fourth sector use a systemic range of voices to manage sustainable companies.

Based on evidence and documents focused on a regional ecosystem, our specific objectives are as follows:

- (1) Establish a conceptual framework regarding innovative business models of those that look to have economic benefits and, in parallel, build social benefits.
- (2) Exhibit evidence of these new business models according to this framework in the construction industry.

This paper applied a comparative and regional analysis methodology to assess whether the systemic component is relevant to companies' considerations and perceptions. The findings suggest a difference between companies in the region and that there are some particularities among the region's leaders, particularly in Chile. Finally, the contribution of this paper is to provide new evidence about how internal and external components connect with management in sustainable companies in the fourth sector. This paper's insights and implications are important in operational practices in these companies, and the management theory is in the scope of this study.

The structure of this paper is as follows:

1. The authors describe a theoretical framework and the article's research design.
2. The methodology and its procedure are exposed and evidenced in Chile.
3. A specific paper section is devoted to results and guidance on innovative processes in the fourth sector.
4. In the last section, the authors present some considerations regarding conclusions, contributions, implications, limitations, and further research."

2. Background and Literature

The definition of sustainable companies and its related terms have been debated, over the last few years [2,16]. Several authors suggest sustainable companies evidence a model that looks to generate economic benefits because of recent challenges by including, among other things, the advancement of social entrepreneurship. In this line, a broad range of private companies and institutions has led to the proliferation of new configurations in the environmental industries. These configurations evidence socially focused businesses to obtain utilities and economic benefits, thereby generating public benefits [2,15,17,18].

2.1. Sustainability in the Fourth Sector

Several authors point out that there is a need to substantiate a more theoretical framework regarding the fourth sector and sustainability [21]. Certainly, the fourth sector approach facilitates the identification of critical elements that conduce the development of sustainable initiatives, but institutions, relations, and instruments must face the requirements that organizations face, which can accelerate the development and growth of these initiatives [27,28].

Some of these critical elements which result in relevant outcomes are as follows [26,29]:

- Firstly, the relations, which are networking structures, groups, and spaces among organizations and initiatives, are relevant to creating an integrative environment because they generate exchange, knowledge, and support.
- Secondly, beyond connections and networks among initiatives, the connections supporting social systems need representation in the public scenario to reinforce several positions.
- Thirdly, regulation is essential because specific fourth-sector organizations are a hybrid type of organization. Such a problem creates difficulties regarding legal recognition.
- Fourth, the need to adapt certification procedures for practices could connect with these initiatives, processes, and values. In this sense, organizations in the fourth sector must disseminate their social impact. Still, these organizations can advance to the common weal by creating alternative and different processes of certification.
- Fifthly, in the fourth sector, some companies and models are still on the periphery of the public debate. For this reason, the development of public relations and communication is essential. Moreover, the existence of sustainable initiatives in the construction sector and the illegitimate debate by part of private organizations are problematic, which confuses clients.
- Sixthly, the organizations in this sector need strategy, technology, accounting, and technical and operative support. Other companies and different organizations can provide such applied knowledge. However, those organizations need to know more about the particularities and idiosyncrasies of this sector [13,30].

Considering all the abovementioned elements, it is possible to present a holistic theoretical framework to describe institutionalism in the fourth sector. As seen in Figure 1, this framework connects situational and contextual elements to structural ones that characterize the organizational core [27]. Particularly in the Latin American region, this framework facilitates understanding various initiatives' differences, similarities, and trends. Regarding fourth-sector practices, some authors [20,31,32] point out that these companies are full of staff who highlight the focus on sustainability and social justice. They also represent a social enterprise by a visionary manager, illustrated by leading and finding innovative solutions to problems [33,34]. In this line, organizations with suitable methods in this sector are described by the worker's active participation and more horizontal structures [35–37]. They have employees who are committed to a solid predisposition for a pragmatic vision and shared leadership, which is less individual and more delegated.

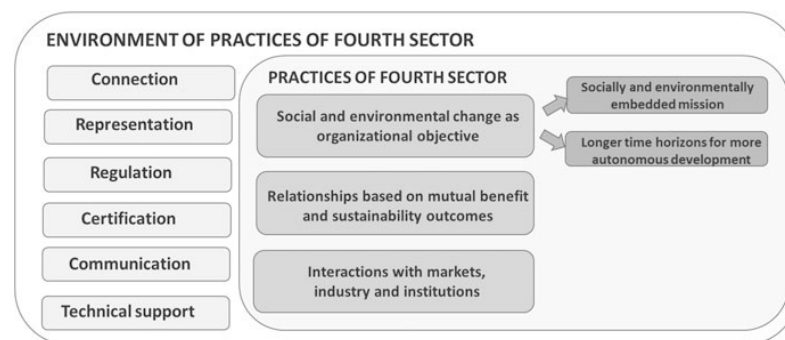


Figure 1. Framework on sustainable practices of the fourth sector. Source: adapted and own elaboration.

2.2. Circular Economy and New Business Models on Sustainability in the Fourth Sector

The well-known circular economy concept has notably developed recently [34,38–40]. The United Nations has recently called for cooperation and an integrative approach to the supply chain. Thus, the fourth sector and diverse industries are accelerating the circular economy as a substitute for a sustainability model [41–45]. The circular economy emerges as a sustainable plan that needs a relevant change of the business system and incorporates both adaptations of the operational activities and actions related to the supply chain in general [46–48]. Thus, under this perspective, in the last decade, circular supply chain management has emerged in the literature [49–52]. This construct incorporates reusable products, flows of waste, and by-products, which facilitate sustainability [1,6,9,53]. Here, the business model in the fourth sector becomes more relevant, and a range of clients, stakeholders, and allies appear [3,10,54].

The European Union's and other countries' economic strategies promote innovative and sustainable economic growth [11,55–57]. The specific plans consider that it is relevant to accelerate the phases of the life cycle of services and products, for example, in design, production, waste management, consumption, and resource use. There are some gaps within this framework in the context of the circular economy [34,58]. Furthermore, it is relevant to pay attention to households and the construction industry without recognizing their facility to be reprocessed and repaired for its reuse [6,59]. This is the sector in which the circular economy strategy in Chile carries out its work [34,60].

Notably, regarding diverse areas of value creation, the most relevant lines of research focus on identifying environmental value through the circular economy, helping a sustainable environment, raising ecology, and recycling [3,5,54]. This consideration supports the cause for taking care of the natural environment. Considering the above, according to the circular economy strategy, the construction industry facilitates a range of business models in terms of creating an environmental, financial–economic, and society-based value in the sector. This strategy facilitates a solid social focus, particularly in Chile [34,38].

Additionally, a circular business model offers new business opportunities for different industries and accelerates sustainable business growth. Numerous entrepreneurs and

private organizations capitalize on innovative, responsible business models due to their positive corporate reputation and their potential for investment return. In environmental terms, the new sustainable models within the fourth sector offer exciting perspectives for addressing, at the same time, social, cultural, and economic values based on its innovation [3,13]. These building blocks of business model innovation determine a solid capture, creation, delivery, and value proposition (see Figure 2).



Figure 2. Conceptual business model framework. Source: own elaboration.

According to [20,60], it applies an integrated approach to developing eight sustainable business model archetypes around these building blocks. These considerations derive from questions of ‘value proposition’, ‘value creation/delivery’, and ‘value capture’. Several authors categorize these archetypes as technological, social, and organizational. Together, these archetypes describe a comprehensive view of sustainable business models: technological archetypes (those that work to maximize efficiency in the uses of energy and materials, intelligent uses of waste, and the substitution of non-renewable with renewable processes), social archetypes (delivering functionality rather than ownership, adopting a stewardship role, and encouraging sufficiency), and finally, organizational archetypes (in terms of re-purposing for society/environment and developing scale-up solutions). In this sense, the orientation for society/environment archetype shows how companies prioritize the dissemination of social and environmental benefits rather than financial profit or shareholder value through a solid integration between the organization, its community, and other stakeholder groups. To sum up, this kind of business model may shift, and the development of scale-up improvements shows how organizations can deliver sustainable solutions on a significant scale that maximizes utilities for society and the environment (Figure 3).

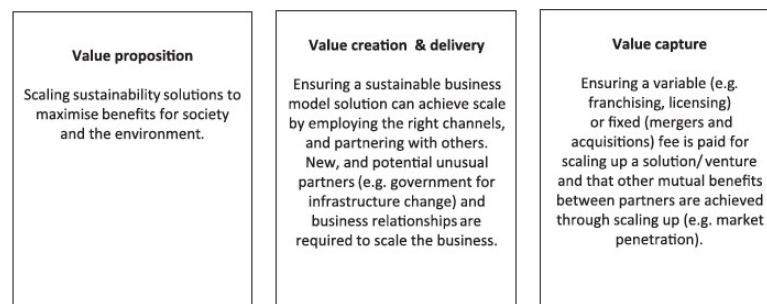


Figure 3. Sustainable business model archetype “develop scale-up solutions”. Source: derived from [20], and own elaboration.

In [20], the authors introduce this archetype to consider the scale-up and widespread presence of business models for sustainability. Some examples of this type of business are built on sound sustainability principles using combinations of the previous archetypes. Such archetype usage represents a challenge for sustainability in general to achieve a scale where firms might make a significant difference to environmental and social sustainability on a global level. Collaborative models rapidly scale up to peer-to-peer models, crowd-sourcing, and open innovation. These all seek to bring like-minded individuals, firms, and investors together to drive the adoption of business ideas and have the potential to change consumption patterns across the world.

For this reason, sustainable companies are seen by several authors as part of the fourth sector, and driven by global concerns over environmental, cultural, and social considerations. To a broad extent, this new sector allows organizations to develop new hybrid business models leaving out the traditional boundaries regarding the public (governments), the private (for-profit), and the social sector (non-profit organizations). The fourth sector organizations are non-profit organizations, cooperatives, and other social businesses with the same organizational models, which fall outside the traditional three sectors [1,60,61]. The original eight business models were developed based on the manufacturing industry, but recently some researchers have also conducted a study regarding business models for sustainability in the banking sector. Their point of departure was the original eight business model archetypes after some authors revised those archetypes with some semi-structured interviews with bankers.

The construction sector, which is the central focus of this paper, has several common denominators with the manufacturing industry. Both sectors focus on products, not services, and have developed into increasingly high-tech, machine-intensive operations with high productivity levels. Hence, we base the study here on the original eight archetypes of [20,30].

Firstly, to describe the conceptual framework of new business models in the fourth sector, aspects derived from academic literature are linked to building a heuristic and comprehensive perspective based on fundamental aspects to comprehend the activities that move fourth-sector organizations. Secondly, we consider suggestions that sustain or restrict the acceleration of ecological units to describe these elements in a larger sense. Finally, identifying these elements will propose a general conceptual and theoretical frame to implement the acts of institutions in such ecological units in a particular region. Regarding the elements to understand the main initiatives of new business models in the fourth sector, the literature considers three key aspects [34,61,62]:

- Firstly, fourth-sector businesses imply societal and ecological change as structural objectives by supplying goods in demand and embedding a social and environmental mission. These projects try to be economically sustainable, pursuing an environmental, social, and economic positive impact on society. This consideration implies working with a significant perspective to reach autonomous development, and particularly, fourth-sector initiatives often renounce scaling up. Instead, they aim for stable, gradual, and controlled growth, which is more coherent with different visions on sustainability and an autonomous strategic plan from other stakeholders than a conventional business. In this sense, these intentions and manners of actions mean that these types of organizations are models in specific ethical and participatory management sectors. This consideration is also present in the methods and practices of sustainable projects in the construction sector; for example, one of the traditional themes found in urban mining is reclaiming metals from urban waste products or buildings.
- Secondly, organizations maintain relationships with suppliers and customers based on mutual benefits and sustainable performance. Costs are relevant but only after the companies reach public and ecological objectives. This type of relationship focuses on empowerment through commitment and consumption for other shareholders and consumers. For some authors, these bonds are trust-based and essential to organizational strength, wisdom, and improvement. Practitioners develop those values regarding relations with stakeholders, suppliers, other companies, and people in general. In the construction sector, the literature underlines the focus of sustainable companies on creating strong, consistent, and trusting bonds between stakeholders. These practices allow builders to gain some of the value created because those practices allow extra negotiation power and let them share some of their risks.
- Thirdly, hybrid organizations represent a set of interactions with markets, institutions, and the industry in general. This kind of autonomous institution seeks to facilitate acceptance of its business model. Hybrid organizations challenge the industry's rules as they operate, trying to describe different, sustainable, empowering models and a solid managerial and operational scheme.

Indeed, despite the literature generally framing business innovation in the context of changing the value proposition for the client, it is more than just altering the product and service offerings for the customer. That is, business model innovation involves modifying the way companies do business. The growth of the fourth sector in the last years has evidenced different trends regarding business model innovation for sustainability. On the one hand, for example, in the private sector, these kinds of initiatives have represented new missions focused on the public view in companies focused on integrating certain social groups. On the other hand, in the third sector, some organizations provide services regardless of governments (that is, sustainability in terms of economic self-sufficiency) but focus on their primary goals. Some government organizations in the public sector are developing new sustainability models for managing communal goods, from water and energy to protected spaces. Additionally, some relevant new organizations and schemes present different models that configure strategies and features from specific sectors and transcend the sectorial boundaries from their origin.

According to [63], companies and theorists conceptualize business model innovations for sustainability as innovations that significantly and positively impact or diminish specific adverse effects on the environment through changes in how the organization and its presence create social, environmental, or economic value. Innovations must change the business model's core competence, maximizing societal, economic, and environmental benefits to intercept the real sustainability challenges. The main reason is that business model innovations for sustainable companies may not be initially viable but may become so due to various regulatory changes.

2.3. New Sustainable Business Models in Construction Projects: The Chilean Case

The year 2012 became a milestone for construction in Chile because companies implemented the country's first foundations for sustainable construction. During this year, several initiatives were born at the public and public-private levels to guide the country toward sustainable construction [4,64,65]. Additionally, the ministries of Public Works, Housing and Urbanism, Energy, and the Ministry of the Environment signed a framework collaboration agreement defining the action each agency would deploy to implement sustainable development in the country, with the purpose of promoting a national public policy of sustainability. This agreement defines the concept of sustainable construction for the country "as a way of conceiving the architectural and urban design, incorporating sustainability in the planning, design, construction, and operation of buildings and their surroundings. It seeks to optimize natural resources and building systems to minimize the impact on the environment and people's health" [66]. The collaborative work of these public institutions allowed the development of the so-called National Sustainable Construction Strategy. This strategy is an instrument that aims to lead the main guidelines to promote the integration of the sustainable development concept in Chile's construction area.

In addition to public initiatives, the public-private initiative that allowed the development and implementation of the Sustainable Building Certification (CES) stands out. This certification aims to evaluate, qualify, and certify the environmental performance of buildings for both new and existing public use without differentiating their administration or ownership (public/private) [24]. The Institute of Construction promoted this initiative together with the Ministry of Public Works, the Chilean Chamber of Construction, the College of Architects of Chile, the IDIEM (Research, Development, and Innovation of Structures and Materials) of the University of Chile, with the co-financing of InnovaChile from Corfo (Corporation for the Promotion of Production) [67,68]. It is relevant that the development of this certification system had the collaboration of different actors (institutions, companies, and organizations) related to sustainable construction, whose interest was to develop, promote, and use this certification in the country [69].

In addition, the Sustainable Housing Certification (CVS) and the Housing Energy Rating (CEV) emerged as part of the national sustainability strategy. The Sustainable Housing Certification (CVS) is a voluntary system for evaluating new homes that assess

environmental, economic, and social performance during the design and construction stages [30]. This system allows certifying projects of any financing in the different cities of Chile. The interest in such certification aims to accelerate the transition toward buildings that incorporate quantifiable attributes of sustainability through objective verification.

This certification has two levels: the Sustainable Certificate Project and the Outstanding Sustainable Project. Projects obtain such certification by meeting all mandatory macro-zone requirements and scoring 60 or more points on a scale of 100 [13]. The evaluation criteria comprise the following elements: (1) health and well-being, (2) energy, (3) water, (4) materials and waste, (5) environmental impact, and (6) immediate environment.

The Energy Rating of Homes (CEV) aims to introduce and disseminate energy efficiency in the building sector, becoming one of the criteria buyers and sellers consider when investing. The market recognizes this rating as a commitment to the environment and sustainability. Chile is the first country in South America to have a system of these characteristics [13,70]. Despite the significant sustainability advances in the construction sector, there are still areas for improvement around it; specifically, because the country must move towards further initiatives that promote the culture of sustainability. For example, the World Economic Forum demands the improvement of Chile's competitiveness when it is globally compared. To do so, Chile must focus, among other aspects, on investment in innovation and sustainability in the sector [27]. The potential to achieve sustainable construction is recognized in the country by the State. Therefore, the National Productivity Commission recommends that the State promote the voluntary certifications mentioned above. It must also introduce requirements for sustainable construction and non-residential buildings and use tax exemptions as an economic incentive to encourage its demand, among other measures [27].

In summary, the transition to sustainable construction requires the Chilean State's incentive to introduce measures that allow ad hoc construction with the demands of the environment. This construction meets the sustainability standards defined at both international and national levels, incorporating the private sector in this task.

2.4. Emerging Characteristics of the New Sustainable Business Models in Construction

In this research, to analyze this conceptual framework in detail, we reviewed the literature regarding the main characteristics of the new business models on sustainability in the fourth sector, applicable both in the European Union and Chile. This line of research intended to detect and compare the advantages and limitations of both new business models for improving these initiatives. Certainly, the new business models on sustainability vary by region and company, although the specific elements may vary related to the environment of the companies. While companies in all regions can achieve an adequate return by investing in environmental process improvements, there is a great diversity in the business case, with interesting differences between regions and types of companies.

For example, in the case of Chile, some institutions have defined new sustainable business models in the construction sector [23,25,39]. Since no company can build a circular business model on its own, the literature review is lacking regarding the potential generation of a value network or a business ecosystem, how interconnection guides the configuration of the theoretical framework, and the analysis of these models. Thus, according to the literature, in Chile, three new business models on sustainability can be characterized as follows [23,25]:

1. The development of open platforms of circular design for economic and social housing.
2. The design of a marketplace for materials and waste construction and deconstruction.
3. The implementation of a passport of materials for construction and asset management.

Similarly, according to some authors, in the case of the European Union, the literature review has described five new sustainable business models in the construction industry [59,62]:

1. The use of bioenergy or materials that are potentially renewable.
2. In a consumer-focused approach, the design of the product as a service, in terms of promotion of rents and collaborative formulas in the sector

3. The development of sharing platforms regarding the increased use of housing through collaborative models of use, access or property, and collaborative housing
4. Designers and engineers who orient their work to prolong the life of buildings through rehabilitation and maintenance of energy efficiency.
5. The recovery of used materials or energy from waste (i.e., steel, recycled aggregates, and others) for use in the construction sector or other industries.

Despite differences, there is enough resemblance between the two new sustainable business models of fourth-sector discussion to guide a synthesis of the issues related to this topic. As a result of this analysis, we distinguish six specific governance issues that are related to (1) the environment of sustainable practices in the fourth sector to work upon shared values, related to two aspects: a systemic framework (in terms of gaps and opportunities), and the scope of the system (to adopt circular strategies and business models), (2) the promotion of circular models in construction regarding two characteristics: the system structure (to implement a program of circular economy business rounds that generate connections and collaborations among economic and social actors), and its ecology (for implementing a program to support companies and public organizations, and identifying some challenges towards the circular economy), and (3) the value creation and delivery for high impact circular economy solutions, that was characterized in this research by means of the action of a system (in terms of diagnosis studies of the potential for transition to circular economy), and its outcome (that is, implementation of collaborative circular economy pilot projects, scaling up the most successful results and disseminating findings).

3. Methodology

This research follows the next steps: Firstly, authors developed a conceptualization and bibliographic revision, mainly over document sources. Secondly, the study proceeds with a quantitative analysis.

Essentially, this research is part of a national project regarding consultation in the context of the Construye2025 project (Build 2025) in Chile between August and December 2018 [44]. The starting point of this research was the roadmap report regarding this project. Such a report describes the fourth sector environment conducive to a circular economy operation context. In this research, extension of the knowledge, reach, and further analysis evidenced different findings focused on governance in the construction sector. A section describes them by presenting findings related to the fourth sector sustainable business models and informs the Chilean circular economy strategy.

3.1. Participants and Sampling

The Pontificia Universidad Católica de Chile (PUC) designed the methodological process of the present research. The Chilean Chamber of Construction (CChC) established an Expert Advisory by the Chilean Chamber of Construction (CChC), consisting of board members and experts in the construction industry and specific areas of circular economy in several sectors in Chile [48,49]. In order to measure the degree of implementation regarding the sustainable business models in the construction industry from a comprehensive overview in Chile, the authors collected the records in two ways: (1) high leaders within construction companies (i.e., established in a high position in their corporations), and (2) agents across the company (that is, full consultation) as main stakeholders within Chilean companies involved in the construction industry of the fourth sector.

The Construye2025 initiative database (Portal construye2025.cl, accessed on 23 April 2021) was the primary source of information regarding construction companies. Additionally, this portal informs on circular economy systems in several regions in Chile. Heads and representatives of companies were invited to participate in the consultation, including the CChC mentioned above, the Production Development Corporation (CORFO), the Ministry of the Environment (MMA), the Ministry of Economy (MINECON), the Sustainability and Climate Change Agency (ASCC), the PUC, and the Chilean Association of Municipalities (ACHM). The Ministry of the Environment has been crucial in this model's transition by

creating the Circular Economy Office in 2018. The Ministry of the Environment adopted several regulations, such as Law 21100, which prohibits specific uses of plastic bags throughout the country, and Law 21368, regarding single-use plastics. In addition, CORFO has submitted several projects since 2018 by implementing competitive processes for funds and developing networks and skill programs. Furthermore, the Sustainability and Climate Agency has led diverse production agreements regarding the circular economy.

3.2. Measures and Data

The open consultation was implemented in four phases [48]: (1) identification of perceptions of stakeholders regarding the construction industry in Chile; (2) documentation of these individuals' perceptions; (3) assessment of perceptions and experiences; and (4) validation of the output. Consulting stakeholders' views, perceptions, and experiences helped us to consider and identify all relevant evidence. Furthermore, it included antecedents regarding a roadmap to a circular economy, and experts validated this confirmation process.

This exploratory study selected participants from diverse construction companies and social and economic institutions to improve triangulation and research validity. We used simple random sampling to collect data in the scope of the study. This data collection considered perceptions of construction practices regarding the circular economy and the specificity of each situation and reflected the actual production systems.

This study also analyzes the actual Chilean affairs based on a subregional assessment and several criteria, which contain instruments concerning circularity, international rankings, and the progress achieved in the construction industry. In addition, the purpose was to describe initiatives and topics regarding fourth-sector environmental, social, and economic viable business models.

Based on the agreement with the CChC, the authors analyzed the data collected with the Universidad Católica de Chile (PUC), which participated in the first initiative. Indeed, it was the very Construye2025 initiative that commissioned a research group from the PUC.

3.3. Information Sources and Design

Firstly, this paper presents the results of the consultation focusing on secondary sources and information revealed by experts. We analyzed the information sources in terms of the following design:

1. A description of the initiative as a context.
2. The analysis of circularity exposed by stakeholders in the construction industry regarding the sustainable ecosystem in Chile.
3. A wide-ranging outline.

Due to the tentative nature of the present investigation, responses were collected in a questionnaire as follows:

Part I: we approached the environment of practices of the fourth sector by two variables: (1) a systemic framework (in terms of gaps and opportunities) and (2) the scope of the system (to adopt circular strategies and business models).

Part II: promotion of circular models in the construction industry in two characteristics, (1) the system structure (to implement a program of circular economy business rounds that generate connections and collaborations among economic and social actors), and (2) its ecology (implementing a program to support companies and public organizations in identifying some challenges towards the circular economy).

Part III: value creation and delivery for high-impact circular economy solutions, which was measured using (1) the action of a system (in terms of diagnosis studies of the potential for transition to the circular economy), and (2) its outcome (that is, implementation of collaborative circular economy pilot projects, scaling up the most successful results and disseminating learnings).

The data analysis focused on the description of the link relating variables (related with Part I and Part II) in terms of groupings and rate of recurrence, respectively. In addition, scales were designed by a Likert-type scale beginning with one and finishing with ten—1

to 10 (also related with Part III). The participants' perceptions of the geographical region or subregion of their company were described in comparative terms. The variables that referred to regions/subregions were categorical data (in nominal order).

Secondly, to analyze the perceptions of the construction industry in Chile related to circularity, we analyzed relationships among variables in terms of the measured perceptions, and regarding the type of participation and the territories (regions) by making statistical contrasts. In research, it is usual to observe abuse of statistical tests, for this reason we previously, and carefully, analyzed the characteristics of the data for the selection of appropriate statistical tests. The initially selected statistical tests for consideration were the *t*-test, ANOVA, Mann–Whitney, and Kruskal–Wallis. However, it was observed that data were non-parametric; thus, we used Pearson's chi-squared test, contingency coefficient, Cramer's V test, Mann–Whitney test, and Kruskal–Wallis test to compare populations and perceptions. We tested the null hypothesis, H_0 , to assess the association between the perceptions and the type of participation by region/subregion.

4. Analysis of Results

Although this analysis was quantitative in nature, we offer an overview to support a more comprehensive understanding of the outcomes using some qualitative approaches such as discussion. Moreover, the main idea is to present any insights as the basis for discovery and debate. First, a general overview will be described regarding the data analysis, and second, the focus will be mainly on Chile.

4.1. Evidencing Circular Economy Strategy in the Construction Industry: A General Overview

Tables 1–3 refer to the general description of the participants [44]. Table 1 shows the profile and descriptive statistics: Construye2025 received 85 answers regarding comprehensive consultation and 300 complete participatory answers from diverse regions (replies by sectors and region are listed below); the total number was 385.

Table 1. Respondents by type of participants and region.

	Private	Public	Academy and Civil Society	The Northern Region	The Central Region	The Southern Region	Total
Comprehensive consultation	45	30	10	28	30	27	85
Participatory consultation	161	111	28	100	98	102	300
Total	206	141	38	128	128	129	385

Source: own elaboration.

Table 2. Profile of respondents.

	Gender of Respondents		Age of Respondents						
	Female	Male	<25	26–35	36–45	46–55	56–65	66–75	>75
Total	22%	78%	1.5%	13.5%	25%	30.5%	26%	3.4%	0.1%
	Job Position			Work Experience of Respondents			Highest Level of Education		
	Manager/Staff	Professional/Employee	Self-employed	Manager/Staff	Professional/Employee	Self-employed	Manager/Staff	Professional/Employee	Self-employed
Total	42%	40%	18%	Total	42%	40%	18%	Total	42%

Source: own elaboration.

Table 3. Geographical area of the research in Chile (subregions).

	The Northern Region	The Central Region	The Southern Region
Subregions	Arica Iquique Antofagasta	Copiapo La Serena Valparaiso	Concepcion Temuco Osorno

Source: own elaboration.

Table 1 shows the demographic characteristics of the respondents in the consultation in Chile. In this analysis it is possible to appreciate some features among private, public, academic institutions, and civil society (there were no participants in the comprehensive consultation, the highest level was in the participatory consultation in public and private participants compared to the other sectors: 90.6% vs. 9.4%, respectively).

Table 2 presents the summary of participants by age and gender regarding the comprehensive and participatory consultations: 22% were women and 78% were men. This table shows that a huge proportion of participants were <55 years old (70.5%). Additionally, Table 3 shows the demographics of the participants at the institution in Chile regarding the target of this research in terms of education, work experience, and job position of respondents. In this sense, it is possible to evidence the differences and similarities among managers and self-employed respondents (42% vs. 18%, respectively), and the high proportion of respondents predominantly showing high experience in the construction sector (87% of respondents evidence more than three years of experience). Similarly, many participants have bachelor's degrees or higher (65% of respondents).

4.2. Sustainability, Circularity, and New Business Models: Insights from the Chilean Context

In this section, we describe some features regarding the governance of circular economy strategy according to the roadmap in Chile [44]. In a regional context, we comparatively describe the similarities and differences in the Chilean case. Thus, we carried out this part of the analysis with institutions and actors grouped into three regions, renamed as: 'the Northern Region' (that is, Arica, Iquique, and Antofagasta), 'the Central Region' (i.e., Copiapo La Serena and Valparaiso), and 'the Southern Region' (including Concepcion, Temuco, and Osorno; Table 3). This methodological design includes particularities in historical, economic, and social considerations providing insights which might not be apparent. Moreover, these features will provide some implications for management. In Table 3, the data distribution shows statistical reports among subregions in Chile.

This research used SPSS and SmartPLS to check descriptive statistics, reliability, and both construct and discriminant validity, respectively. On the one hand, we examined the data characteristics using the outcomes of descriptive statistics conducted utilizing SPSS: its central tendency, variability, symmetry, and peakedness; the statistical analysis started with the empirical identification of the variables, which did not assume normality. On the other hand, we tested the reliability and validity of the scales. Due to our sample size and considering that it is possible to treat Likert measures as interval data, we examined the Cronbach's Alpha, and the relations between the Likert questions were evaluated through the technique of partial least squares (PLS) analysis, confirming the validity of the constructs (see results in Table 4).

To validate the results, we created scales for further analysis as the mean scoring of the sum of the items that individually measured these constructs. In terms of the data distribution, we selected three statistical tests as appropriate tests for analysis due to the non-normal nature of the data. The study used chi-squared, contingency coefficient, and Cramer's V. Mann–Whitney and Kruskal–Wallis tests were conducted because of the non-parametric or uncertain nature of the data. On the one hand, if the objective is to compare the outcomes of two groups of non-parametric data, the Mann–Whitney is a robust statistical technique as a counterpart of the *t*-test. On the other hand, similar to the ANOVA test, the Kruskal–Wallis test for non-parametric data is appropriate if the

independent variable has three or more categories on a variable that fails to meet the normality distribution.

Table 4. Reliability and validity of scales.

Scale	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)			
Systemic framework	0.819	0.831	0.467			
Scope of the system	0.884	0.901	0.583			
System structure	0.873	0.889	0.618			
Ecology	0.967	0.986	0.622			
Action of the system	0.881	0.905	0.581			
Outcome	0.541	0.718	0.399			
Discriminant Validity Results						
Scale	Systemic Framework	Scope of the System	System Structure	Ecology	Action of the System	Outcome
Systemic framework	0.684	-	-	-	-	-
Scope of the system	0.421	0.767	-	-	-	-
System structure	0.005	0.003	0.776	-	-	-
Ecology	0.078	0.021	0.311	0.901	-	-
Action of the system	0.101	0.031	0.074	0.095	0.786	-
Outcome	0.008	0.074	0.001	0.028	0.202	0.632

Source: own elaboration.

In Table 5 we can see results for usual levels of significance (if p -value < 0.05, H_0 is rejected). According to the comprehensive consultation, the sum of respondents was 28, 30, and 27, respectively, in each subregion (see below), and 385 in total (that is, comprehensive and participatory consultation).

Table 5. Statistics for global results and by regions in Chile.

Questionnaire	Chi-Squared (Sig. 2-Sided, p -Value)	Conting. Coef. (Value)	Cramer's V (Value)
Part I: environment of practices of fourth sector			
Gaps and opportunities of the system—framework: general results	0.001	0.481	0.222
Private vs. Public/Academy/Civil society	0.000	0.352	0.395
The scope of the system (adoption of circular strategies and business models): global results	0.043	0.291	0.381
Private vs. Public/Academy/Civil society	0.004	0.385	0.293
Part II: promotion of circular models in the construction industry			
The structure of the system (program for collaborating among economic and social actors): global results	0.001	0.486	0.513
Private vs. Public/Academy/Civil society	0.022	0.491	0.002
The ecology (program for identifying challenges towards the circular economy): global results	0.001	0.543	0.391
Private vs. Public/Academy/Civil society	0.002	0.271	0.283
Part III: perceptions of value creation and delivery for circular solutions	Mann–Whitney (p -value)	Kruskal–Wallis (p -value)	

Table 5. Cont.

Questionnaire	Chi-Squared (Sig. 2-Sided, <i>p</i> -Value)	Conting. Coef. (Value)	Cramer's V (Value)
Diagnosis for transition to the circular-economy-system operation: general results	-		0.021
Northern vs. Central Region	0.003		-
Northern vs. Southern Region	0.057		-
Central vs. Southern Region	0.000		-
The outcome (scaling up and disseminating collaborative projects): global results	-		0.001
Northern vs. Central Region	0.000		-
Northern vs. Southern Region	0.003		-
Central vs. Southern Region	0.011		-

Source: own elaboration.

Table 5 reveals that the zero hypothesis of homogeneousness in the perceptions could be declined. Thus, participants in this research differed on the importance of circularity in the construction industry. According to these results, resistance to circular economy strategy is shown for adopting a roadmap in this industry in terms of the limited benefits and threats. According to several authors, the adoption of information technologies has evidenced cultural barriers, institutional restrictions, and the requirement to adjust business models in terms of certain industry disruptions and automation in construction projects [56,57]. Therefore, actors and institutions in this industry must act together, not just to diminish the cultural separation, but also to facilitate access to technology, and organizational and institutional opportunities [51,56]. Their different dimensions and social solutions can help them detect misinformation and become sustainable business models. For these reasons, sectors and stakeholders must be involved in this systemic approach, implying some economic, social, and environmental effects [21,48,49]. This consideration facilitates the separation between economic development and the consumption of resources [37,41]. This result suggests that stakeholders remain sufficiently unfamiliar with circularity principles or the way to operate in the environment [58,64,65]. Participants in this research reinforced the benefits and advantages of a circular economy in all sectors (for example, in the fast-moving consumer goods industry and the automotive industry), but they were not able to describe how to reach these benefits and utilities in the construction industry. Essentially, few stakeholders described how to facilitate a relevant transition to a circular economy. Even though stakeholders reacted differently and despite the broad literature on this topic, there is scarce evidence on the relationships described in this research.

The study separated the results between private actors and public/academy/civil society for more ground analysis. The results evidenced that these perceptions were extensively shared.

Consequently, results show that the contextual elements linked to a circular economy and sustainable business models in the construction industry are measured in terms of gaps and opportunities of the system (framework) and the system possibilities—globally and between private vs. public/academy/civil society. Moreover, these findings facilitate the integration between regulatory and national policies or imply that regulations were incorporated into strategic plans in companies and corporations [51,57]. From an integrative approach to understanding circularity in the construction industry, institutions need to analyze their strategic and operational plans. Thus, they should consider the gaps, risks, and opportunities of circularity regarding its participation in the industry. Actors can benefit from environments that incorporate organizational, cultural, and social considerations, but companies require systemic adaptations to introduce technology in the construction industry in Chile.

Additionally, institutions must change from being facilitators to becoming proactive agents in the industry. Administrators and managers need to redefine the roles of

formal vs. informal education [43,45]. In addition, local governments must establish institutional frameworks to initiate the circular economy and raise living standards dealing with sustainable business models. For example, regarding circularity, leaders in the manufacturing industry agreed with the thesis that technology is part of a comprehensive development strategy [21,25].

According to this circularity vision, policymakers create an environment that facilitates the transition towards a circular economy. These environmental policies remove barriers and initiate innovation, facilitating the increase in the organizational productivity, shifting towards life cycle assessments of the construction industry, and exploring some standardized metrics for circularity [62,63,70]. This example facilitates the potential change for the circular economy in the ecosystem and value chain in terms of the design, construction, operation, renewal, and repurpose in the construction industry. For this reason, this change requires designers and investors to take a longer-term view, focusing on the lifecycle of the construction sector and facilitating the future usage of materials and components. This strategy involves collaboration and information exchange and requires incentives enabling investors to receive a huge return on investment decisions that affect properties and spaces. Furthermore, new business models increase the use of renewable resources [23,24,28].

While measuring the promotion of circular models in the construction industry regarding system structure and ecology, this research revealed the relevance of using instruments regarding managers at organizations and companies, and variations in strategic and operational tools. Furthermore, according to several authors, the global perspective and a regional focus reinforced this finding [8,9].

In a further analysis, we asked respondents about implementing value creation and delivery for high-impact circular economy solutions in the construction industry, measured by the system's operation and results. There are no statistically significant variations regarding the system's functioning and the results between the Northern and Southern regions. However, we observe a significant difference in the other cases.

Indeed, based on the responses from the participants and institutions, the authors found evidence that the transition towards a circular economy strategy requires an understanding, in a general sense and in the long term, while taking into account the historical context of this region and in the construction industry in Chile, where changes must be implemented in a faster way due to the relevance of circularity in global terms [37]. Globally, despite the recent transformation on this topic, there are still cultural and institutional divergences in actors, agents, and companies affecting specific portions of regions [45,46]. Evidence also shows that the technological transformation related to the recent pandemic will accelerate the necessary transition through a circular economy strategy [47].

4.3. Additional Discussion

Through this framework, this paper detects circular economy strategies in the fourth sector, establishing a conceptual framework on innovative business models and exhibiting evidence of these models in terms of this framework in the construction industry.

We applied a comparative and regional analysis methodology to assess stakeholders' considerations and perceptions. The findings suggest a difference between perceptions in the regions/subregions, and this paper provides new evidence of how these insights and implications are important in operational practices in companies in the scope of this study. In this paper, we examined three elements:

- Some environments of practices of the fourth sector;
- The promotion of circular models in the construction industry;
- The perceptions of value creation and delivery for circular solutions.

The general view of the circular economy and the relevance of different strategies in the fourth sector has prompted many actors and stakeholders to turn their attention to innovation in their activity area [66–68]. For companies, the identification of gaps and opportunities in the system—that is, to focus on the general framework of this analysis, and

to analyze the scope of the system (in terms of adoption of circular strategies and business models)—is essential to reinforce their competitive advantage [65–68].

Looking at specific characteristics of construction companies can help to understand these results. Typically, regarding the gaps and opportunities of the circularity framework, concerns about environmental preservation impels stakeholders to avoid risky decisions, creating a preservation approach and facilitating innovation capabilities in the fourth sector companies, among other effects [55–58]. However, there is also evidence of firms engaging in risk-taking decisions [54]. In this sense, it is widely accepted in the literature that the business environment plays a crucial role in sustainable considerations [23,24]. Managers make this type of strategic decision on sustainability after analyzing the sector's competitive framework and legal norms [47]. In our research, results show that the external context in companies influences the factors that enhance their strategic profile, such as a systemic framework and the scope of the system.

According to our conceptual framework, new business models in the fourth sector can facilitate innovation, but obviously, they reduce the financial resources available for alternative uses. Moreover, when external events impact the availability of resources, companies tend to desire agreements and environmental regulations or implement innovation activities that entail a longer-term plan [25,39]. Moreover, social capital resources and regulations must facilitate the design of a collaboration-focused framework to innovate [23]. Available information resources and systems in the circular economy also tend to be preferred to broaden the system's scope by utilizing indicators and data for modeling the environmental impact of business initiatives [39]. In this sense, the theory holds that the intention to preserve the business for future generations reduces the tendency to take risks in adopting new business models. For example, a general overview of the theories related to environmental economics, shows evidence that the ecological economy theory is adequate to address the inclusion of the stakeholders' vision in the topic of the fourth sector, since it considers the perspectives of the communities and their interests regarding the use of natural resources [22]. However, in a traditional view of sustainability, companies in the construction sector tend to focus on utilities and cost-saving in a context with a scarcity of internal and external resources [25].

In our research, we observe that the positive impact of circular economy initiatives on the system structure and its ecology are two relevant considerations according to the perceptions in Chile, in line with previous studies about these topics [15,19]. Additionally, our results show that when sustainability faces difficulties to finance new business models in the fourth sector—to impulse reputation, increase social capital in the circular economy, or facilitate social innovation, among others—sustainable companies in the construction sector tend to adopt existing circular models in order to preserve their survival in the market [15]. Consequently, according to the ecological economy theory, actors perceive innovation as a potential opportunity.

Finally, because actors define a business model by the value proposition, value creation, delivery, and value capture, many questions have to be taken into consideration in the value creation, delivery, and value capture in the construction sector in Chile. This process impacting on activities, resources, partners, and others, is only focused on developing a method to describe the behavior of the stakeholders as the leaders in the industry. More and better insights grounded in empirically based findings regarding the system's action and outcome are essential to alert groups of interest to the necessity of being open to the needs and perceptions of customers, partners, and stakeholders in the fourth sector.

- The new business models in the circular economy related to sustainable companies represent an excellent opportunity to test the intuitive proposition that, since companies are more open to change in this challenge regarding sustainability [69,70], managers have to identify several investment opportunities [21], and thus increase their awareness and disposition to invest. According to our results, the debates about the relevance of innovation in the fourth sector requires an additional analysis and consideration regarding the action of the system, the development of campaigns with

value and low environmental impact to raise awareness about this impact, and the promotion of repair and reuse of products are initiatives of interest. Similarly, in terms of outcome, promoting strategic collaboration for high-impact circularity solutions and the reactivation of territories must command the public agenda in the construction sector. In addition to the context, the environmental risks are in question regarding the potential of innovation in the fourth sector [24,25,71,72].

5. Conclusions, Contributions, Limitations, and Further Research

This paper offers a relevant contribution by theoretically and empirically illustrating how to understand the dynamics of sustainable organizations and alliances in the fourth sector. New evidence shows how internal and external components impact management in these kinds of companies. The proposed framework in this paper is relevant for addressing these aspects. For the case of the ecosystem of sustainable organizations in Chile, the framework's application can explore its complexity and diversity, particularly the relationship between opinions and perceptions in the fourth sector and the development of environmental strategies and practices through cooperation between public and private institutions. In this paper, the analysis presents not only common features but rather a set of diverse strategies and perspectives. The evidence also points out the relevance of contextual features evidenced in the literature regarding regulations and networking.

Several authors investigating on the fourth sector have described different kinds of innovations, organizations, and models regarding this topic. However, there is a need to understand the dynamics that occur within the fourth sector, and how practices are working and can be facilitated. The aim of this paper was to fill this gap by proposing a general framework to explore a particular ecosystem in the fourth sector sustainable organizations to provide recommendations for those that run companies and more broadly any kind of organization.

This paper offers an overview disseminating concepts from the fourth sector discussions with a focus on business model innovation. Moreover, this research describes evidence in the construction industry resulting in great significance for the three sustainability pillars—economic, environmental, and social. In this vein, this article offers a relevant contribution by theoretically and empirically illustrating how to understand the dynamics of sustainable organizations and alliances in the fourth sector. New evidence shows how internal and external components impact management in these kinds of companies. The proposed framework in this paper addresses these aspects. Regarding the ecosystem of sustainable organizations in Chile, the framework's application can explore its complexity and diversity, particularly the relationship between opinions and perceptions in the fourth sector and the development of environmental strategies and practices through cooperation between public and private institutions. In this paper, we can observe the importance of contextual elements regarding regulations and networking.

This article also offers some managerial implications by highlighting the relevancy of monitoring general guidelines and principles to impel fourth sector projects in terms of legal support, giving legitimacy, and applying norms to these initiatives in decision-making processes. Finally, this article shows the value of networking for organizations and initiatives.

Despite these contributions, this research has several limitations. Firstly, it is evidenced that regional knowledge varies a lot in forms and voices, and so does the stakeholder when it comes to their background and perceptions. Secondly, to broaden this limitation, future research can be conducted under different regional settings, and the comparative analysis can be expanded to several groups of interest by in-depth interviews. For example, it could also be interesting to create a more comprehensive theoretical framework by extending the analysis to the regional level, analysing Chile, and comparing to other countries. Grounded theory could be useful to disseminate comprehensive explanations about these topics and phenomena.

Future research derived from this paper could recognize another crucial aspect of the environment that could lead to accelerate or retard the improvement of sustainable initiatives

on any organization that belongs to the fourth sector. Those research enterprises will be of particular interest to investigate the impact on different regions and domains to evidence cases in which both cooperation and tension are evident and compare insights and findings on common features to develop a more robust implementation on sustainable companies in the fourth sector. This paper's insights and applications are important in operational practices in these companies and the management theory in the scope of this study.

Additionally, this paper intended to describe the design and implementation of sustainable management techniques between organizations evidencing new initiatives in the fourth sector. Firstly, a general overview of such practices and techniques is described. Secondly, a methodology regarding the most relevant managerial processes is described and evidenced in Chile. Moreover, this paper describes and discusses guidance on innovative processes in the fourth sector. The main contributions of this paper reinforce the relevance of improving the orientation toward circularity regarding the competitiveness of sustainable companies and the importance of shedding light on specific components and variables at different levels of management performance.

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