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The Role of Complementary Monetary System as an Instrument to Innovate the Local Financial System

Alexandra Lenis Escobar [1], Ramón Rueda López [2,*], Miguel Ángel Solano-Sánchez [2] and María de los Baños García-Moreno García [2]

[1] Grupo de Investigación SEJ-588 Economía del Turismo, de la Cultura y del Deporte, University of Cordoba (UCO), 14071 Córdoba, Spain; r52leesa@uco.es

[2] Department of Statistic, Econometrics, Operational Research, Business Organization and Applied Economics, University of Cordoba, 14071 Córdoba, Spain; d42sosam@uco.es (M.Á.S.-S.); d52gagam@uco.es (M.d.l.B.G.-M.G.)

* Correspondence: ramon.rueda@uco.es

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Abstract: For decades, complementary monetary systems (CMSs) and open innovation in the local area have coexisted alongside official currencies. Today, when it is most necessary to innovate and act locally to solve global problems, it is appropriate to increase the usefulness of financial instruments, such as social and complementary currencies, which can contribute to building more sustainable and resilient cities and thus achieve the Sustainable Development Goals (SDGs). This research, through a synthetic analysis, contributes to the scientific debate on the usefulness of the CMSs. It examines the practical way in which these instruments can be used to innovate in local financial systems as elements capable of promoting and dynamizing the economic and social relations of a locality.

Keywords: complementary monetary systems; innovation; local area; cities; urban resilience; sustainable local development; SDG

1. Introduction

The social and economic crisis derived from the COVID-19 pandemic, affecting our societies, has been added to the global challenges that the international community set in the 2030 Agenda. In this scenario, the 17 United Nations' Sustainable Development Goals (SDGs) gain special significance as a guide to continue outlining the accomplishments that the societies must achieve, especially in urban areas.

This challenge implies changing or adapting strategies that until now have been able to be implemented, adopting an innovative perspective [1]. It is necessary, therefore, to experiment with new and different forms of social, political and economic interventions that, while not being able to offer a definitive solution to these global challenges, can be part of some solution instead of continuing to be part of the problems [2].

Thus, from an economic perspective, answers to this challenge can be found. Therefore, facing a prevailing system that encourages competitiveness and accumulation, even at the expense of sustainability, methods such as the economy for the common good propose development models based on the common good of the inhabitants can be used, built through municipal and inter-municipal cooperation and with the participation of the different agents of the municipality as the cornerstone. The economy for the common good, by promoting social participation in a democratic manner not only in the decision-making process but also in the management, performance and control of results, implies an important driving force for community empowerment [3,4].

It is also possible to answer previous challenges using social innovation [5,6]. Likewise, the contributions of the public sector and the private sector are essential for the implementation of the United Nations' 2030 Agenda [7].

In line with the proposals that take part in the solutions, decent work plays a central role, being not only an objective of the 2030 Agenda but destined to be a transversal axis of all the actions and policies implemented to achieve it. According to the International Labor Organization (ILO), decent work is in itself a driving force of sustainable development, which directly has an impact on all the SDGs [8].

However, considering that the balance between the economic, the social and the environmental goals cannot be accomplished following the paradigm of sustainable development [9,10], it is necessary to strengthen local financial capacity as a key factor to build resilient cities [11,12].

Within the set of possible solutions, this research aims to highlight those related to complementary monetary systems (CMSs), that is, those complementary currencies that, unlike other complementary payment instruments with a commercial or business orientation, seek to have a beneficial impact on society [13].

Thanks to the complementary nature of the CMSs, they can provide high flexibility, capacity and resistance to the socioeconomic system of a locality [13]. This means that, essentially, they can have a high potential to strengthen sustainable local development processes and stimulate urban resilience. However, achieving this requires identifying those external and internal conditions that favor or hinder its operation during its implementation and management [14,15].

While how CMSs are pushing sustainable development processes has been analyzed in various studies [16–18], how these financial instruments can be useful for achieving the SDG has not been dealt with in-depth in the scientific literature. This research is therefore intended to contribute to this scientific debate. At the same time, the specific objective of this investigation is to analyze the practical ways in which CMSs can be used in local financial systems by various public and private actors with the aim of making more sustainable and resilient cities within the framework of the SDG.

The methodology used in this research is the synthetic-analytical method. This methodology can provide, in the first stage, division of the subject of study into the main elements of which it is composed to determine its characteristics and particularities. In the second stage, synthesis, each of these particularities and characteristics is integrated from a comprehensive and interrelated perspective, leading to understanding the subject of study in its full and joint dimensions [19].

As regards the first stage, the analysis presented in the theoretical framework sections was carried out using a review of the scientific literature focused both on sustainable local development and urban resilience and on social and complementary currencies. Two scientific databases, Web of Science (WoS) and Scopus were used. In a subsidiary manner, Google Scholar was used.

The choice of these three databases was derived from the aim of further research into local development, sustainability and urban resilience and knowledge of social and complementary monetary systems. To achieve this, a set of keywords was used in the search for scientific literature, such as 'local development', 'social currencies', 'complementary currencies', 'parallel currencies', 'local currencies', 'regional currencies', 'regional currencies', 'assessment', 'resilience', 'sustainability', 'Sustainable Development Goals'.

Both the search in the above-mentioned databases and the choice of keywords, as well as the subsequent selection of the scientific literature used, were carried out by establishing an initial time frame of the last five years. However, in order to expand the reference sources on the subject matter of the study, this time frame was gradually extended.

In addition, in the second stage, presented in the analysis and discussion section, each of the elements analyzed at the previous stage was combined and set up in relation to each other, forming a homogeneous set from which the role that SDG and currencies as a whole can have in cities and, ultimately, can contribute to building more resilient and sustainable cities.

Thus, this article is structured, after the introduction, in two sections. First, the theoretical framework: in this section, the Sustainable Development Goals and complementary currency systems are analyzed. Second, analysis and discussion, where how these complementary currency systems can help achieve Sustainable Development Goals, and how complementary currency systems could be applied to cities are discussed; after this, how to build more resilient and sustainable cities through complementary currency systems is analyzed. Finally, this article ends with the conclusions and bibliographical references used in the research.

2. Theoretical Framework

2.1. Sustainable Development Goals

After the successes and failures achieved by the international community by the implementation of the eight Millennium Development Goals—eradicate extreme poverty and hunger; achieve universal primary education; promote gender equality and empower women; reduce child mortality; improve maternal health; combat HIV/AIDS, malaria and other diseases; ensure environmental sustainability and foster a global partnership for development [20]—the United Nations returned to promoting a global strategy to combat poverty. Thus, in 2015, the United Nations General Assembly approved the 2030 Agenda for Sustainable Development. This proposal articulated the 17 Sustainable Development Goals (SDGs), and the 169 goals have become, since then, the cornerstone to achieve. " ... We are determined to liberate humanity from the tyranny of poverty and deprivation and to heal and protect our planet. We are determined to take the bold and transformative steps that are urgently needed to steer the world back on the path of sustainability and resilience [...] as well as sustainable consumption and production, sustainable management of natural resources, to ensure that all people can enjoy a prosperous and full life, due to economic, social and technological progress in harmony with nature" [7].

With the SDGs, the United Nations created a vision of a sustainable, inclusive and sustained economic growth world, with decent work for all and where good governance and the rule of law are the guiding principles of the shared actions of social agents globally, aiming for dynamic, sustainable, innovative and people-centered economies [7].

The consequence of these objectives is, as the first of the SDGs states, an end to poverty. This target description includes different forms of poverty, such as discrimination and social exclusion, which includes the absence of the participation of the poor in decision-making, especially those decisions that affect them. Therefore, one of the goals of this objective is to guarantee, by 2030, that all men and women, and in particular the poor and vulnerable, have the same access to economic resources, as well as access to basic services, ownership, lands and other assets, inheritance, natural resources, appropriate new technologies and financial services, including microfinance.

For its part, Goal 8 of the SDGs agenda on decent work and economic growth establishes in its introduction that "to achieve sustainable economic development, societies must create the necessary conditions for people to access quality jobs, stimulating the economy without damaging the environment. There will also have to be job opportunities for the entire working-age population, with decent working conditions" [7].

Among the goals required to achieve this objective are found: promotion of development-oriented policies that support productive activities, create decent jobs, entrepreneurship, creativity and innovation and promotion of the creation and growth of microenterprises and small and medium-sized enterprises (SMEs), including access to financial services, as well as protecting labor rights, fostering a safe and secure work environment for all workers.

Sustainable Development Goal 9 is about building resilient infrastructure, promoting inclusive and sustainable industrialization and fostering innovation. Among the goals to achieve this aim is found increasing the access of small industries and other companies to financial services, including affordable credit and their integration into value chains and markets [7].

SDG 11 aims to contribute to making cities and human settlements inclusive, safe, resilient and sustainable. Among the goals to achieve this objective are ensuring access for all people to adequate, safe and affordable housing and basic services, and improving marginal neighborhoods; redoubling efforts to protect and safeguard the world's cultural and natural heritage; supporting economic, social and environmental links between urban, peri-urban and rural areas strengthening the national and regional development planning as well as significantly increasing the number of cities and human settlements that adopt and implement integrated policies and plans to promote inclusion, efficient use of resources, climate change mitigation and adaptation and disaster resilience [7].

For its part, SDG 12 concerns guaranteeing patterns of sustainable consumption and production. Some of the goals to achieve this aim include reaching the sustainable management and efficient use of natural resources; significantly reducing the generation of waste through prevention, reduction, recycling and reuse activities, and developing and applying tools to monitor the effects on sustainable development to attain sustainable tourism that creates jobs and promotes local culture and products [7].

A priori, it may seem that there are many aims to achieve the 17 SDGs. However, it is an ambitious project that will lead us to redirect our world to the path of sustainability and resilience [7]. The implementation of the SDGs must necessarily be carried out both holistically and locally and must also be linked to local concerns and practical solutions [21].

2.2. Complementary Monetary Systems

Complementary monetary systems (CMSs) are a social and economic phenomenon that, in one way or another, have always been present in human society [22]. However, the exponential growth that since 1984 has been developed in the design and use of these currencies, such as time banks, barter systems, and local exchange trading systems (LETS) [23], has not gone unnoticed in the scientific literature [24,25].

In 1999 Lietaer coined, for the first time [26], the complementarity criterion to define the characteristic that certain currencies had to operate and perform together with an official currency [27].

From this criterion of complementarity, Lietaer [27–29] began to refer to complementary currencies as an agreement, within a community, to accept a non-national currency as a medium of exchange, to link the dissatisfied needs with resources that otherwise would not be used. In fact, they are called complementary because their intention is not to replace the official currency but to perform social functions for which this official currency was not designed, to which is added the fact that most people use both currencies in parallel.

The scientific literature has approached the study of CMSs from different perspectives, such as its historical evolution [23,30], its classification [23,31], their purposes [23] or the impact they may have on the local or regional economies in which they are found [22,31–34].

However, despite the intensity with which this type of currency has been investigated, it is not possible to find a single definition of CMSs, as they have a diversity of terms with which to refer to them, such as parallel currencies, complementary social currencies, local currencies or alternative currencies. Thus, authors such as Lietaer [24,27,35], Seyfang [25,36], North [37,38], Blanc [39,40], Fare [22,41], Primavera [42] and Gawthorpe [43] have developed various definitions that have been enriched over time based on what these authors have understood of CMSs.

Appendix A shows the main definitions and explanations that several authors have offered about CMSs and displays some common characteristics that will be the object of later analysis.

Following Doria and Fantacci [44], it is not a question of finding a unique explanation or concept about what CMSs encompass. Thus, in this research, respecting this plurality of concepts and instruments, the term "complementary social monetary systems" (CSMS) will be used to refer to those instruments that, being accepted as a means of payment and coexisting with an official currency, allow the exchange of goods and services in a specific geographic area (neighborhood, town, council or region), excluding the purpose of accumulating value into their functions.

3. Analysis and Discussion

3.1. Sustainable Development Goals and Complementary Social Monetary Systems

This research analyses some aspects of the implementation of a CSMS as a strategy to achieve the goals and objectives of the 2030 Agenda. The social and complementary currencies are designed to meet specific aims set in advance [41,43,45,46]. For this reason, these types of currencies have great potential to contribute to achieving the goals of the SDGs. Table 1 shows some of the SDGs and targets that would be positively impacted by the implementation of certain types of CSMS.

Table 1. Sustainable Development Goals and targets likely to be affected by the implementation of a complementary social monetary system.

<table>
<tr><th>SDGs</th><th>Target</th><th>How It Can be Affected</th></tr>
<tr><td rowspan="3">1. End poverty in all its forms everywhere.</td><td>1.3 Implement at the national level appropriate social protection systems and measures for all, including minimum levels, and, by 2030, achieve broad coverage of the poor and vulnerable.</td><td rowspan="3">One of the main causes of poverty is the difficulty that many people can have access to decent employment. In this regard, public administrations may be able to create decent jobs that are paid partly or in full by CSMSs. For this measure to be successful, it is essential to be able to use the salary obtained by CSMSs in the payment of goods and services, public, private and local. In this way, in addition to ensuring decent work, access to economic and social rights is facilitated, ultimately reducing people’s exposure to periods of economic and social crises.</td></tr>
<tr><td>1.4 By 2030, ensure that all men and women, particularly the poor and vulnerable, have equal access to economic resources and basic services, ownership and control of land and other assets, inheritance, natural resources, appropriate new technologies and financial services, including microfinance.</td></tr>
<tr><td>1.5 By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental disasters.</td></tr>
<tr><td rowspan="3">5. Achieve gender equality and empower all women and girls.</td><td>5.4 Recognize and value unpaid care and domestic work through public services, infrastructures and social protection policies and promoting shared responsibility in the home and family, as appropriate in each country.</td><td rowspan="3">The CSMSs can be an optimal tool for unpaid work that women are engaged in in the area of the care economy. More specifically, time banks or, in particular, instruments such as Local Exchange Trading System (LETS) can be used by public and private entities to pay and ensure visibility for a job, such as care which has not been adequately paid up to date. These initiatives must be designed to promote the empowerment and economic independence of many women.</td></tr>
<tr><td>5.5 Ensure the full and effective participation of women and equal leadership opportunities at all decision-making levels in political, economic and public life.</td></tr>
<tr><td>5.a Undertake reforms that grant women equal rights to economic resources, as well as access to ownership and control of the land and other types of goods, financial services, inheritance and natural resources, following national laws.</td></tr>
<tr><td rowspan="2">6. Ensure access to water and sanitation for all.</td><td>6.1 By 2030, achieve universal and equitable access to drinking water at an affordable price for all.</td><td rowspan="2">Recognition of CSMSs as a means of payment by public administrations providing water and sanitation services can facilitate and ensure access to these services for the local community. The participation and social consensus that must be generated around the management of CSMSs, in turn, may be the way for citizens to participate in the definition of public prices for these services in terms of CSMSs.</td></tr>
<tr><td>6.b Support and strengthen the participation of local communities in improving water and sanitation management.</td></tr>
<tr><td>7. Ensure access to affordable, reliable, sustainable and modern energy.</td><td>7.1 By 2030, guarantee universal access to affordable, reliable and modern energy services.</td><td>In recent years, many initiatives have emerged in the social economy aimed at providing green and sustainable electricity. To add these energy cooperatives to the CSMSs utilization network would make it possible not only to strengthen these business initiatives in themselves but also to facilitate access to energy services for those who obtain their wages or part of their wages through CSMSs.</td></tr>
<tr><td rowspan="4">8. Promote inclusive and sustainable economic growth, employment and decent work for all.</td><td>8.3 Promote development-oriented policies that support productive activities, the creation of decent jobs, entrepreneurship, creativity and innovation, and encourage the formalization and growth of microenterprises and SMEs, including through access to financial services.</td><td rowspan="4">One of the characteristics defined by CSMSs is it is recognized and used as a means of payment only in a given territory. In this regard, the fact that the economic circuit generated by the CSMSs remains centered on a territory encourages people who are members of the community to acquire goods or services from that territory, increasing economic activity and local consumption [47].
The economic benefit created by savings and expenditure generated within that territory, as a benefit derived from the CSMSs, should be used to cover expenditures or finance local investments [31,48]. This benefit that CSMSs can have a positive effect on local economies by endogenously affecting them [41] certainly has a positive effect on local human development and on the definition of more resilient territories [49–51].</td></tr>
<tr><td>8.5 By 2030, achieve full and productive employment and decent work for all women and men, including youth and people with disabilities, as well as equal pay for work of equal value.</td></tr>
<tr><td>8.9 By 2030, develop and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products.</td></tr>
<tr><td>8.10 Strengthen the capacity of national financial institutions to promote and expand access to banking, financial and insurance services for all.</td></tr>
</table>

Table 1. *Cont.*

9. Build resilient infrastructure, promote sustainable industrialization and foster innovation.	9.1 Develop reliable, sustainable, resilient and quality infrastructure, including regional and cross-border infrastructure, to support economic development and human well-being, emphasizing affordable and equitable access for all. 9.3 Increase access to small industries and other businesses, particularly in developing countries, to financial services, including affordable credit and their integration into value chains and markets.	Similarly, CSMSs can be used for decent jobs, and these instruments can, in turn, play an important credit role in financing investments with a high impact on local markets, favoring the competitive position of the local business sector. CSMSs have also been identified as particularly useful tools to facilitate the processes of making a countervailing agreement between creditors and debtors possible to alleviate issues that some companies may suffer in dealing with a competitive procedure [52].
10. Reduce inequality within and among countries.	10.3 Guarantee equal opportunities and reduce disparities of results, even eliminating discriminatory practices, policies and laws, and finally promote adequate legislation, policies and measures in this regard. 10.4 Adopt policies, especially the fiscal, wage and social protection ones, and progressively achieve greater equality.	Adopting and promoting CSMSs from a public administration, where appropriate, involves the establishment of top-down action in the service of general interest objectives and policies defined by governments. This alignment with social, economic and political strategies in a territory [53] may provide an opportunity within local public policies [15] to strengthen social relations, reciprocity, mutualism, responsibility and trust among economic and social actors in a territory by ultimately promoting a human development model in which finances are raised as a tool to strengthen social ties and local economic life. In some ways, the economic impact of public resources—effectiveness—is possible without increasing public expenditure—efficiency—(Dini y Kioupkiolis, 2019; Eizaguirre Anglada, 2016; Muns Terrats et al. 2019; Seyfang, 2006; Spano and Martin, 2018).
11. Make cities inclusive, safe, resilient and sustainable.	11.1 By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrading of slums. 11.a Support positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional development planning. 11.b By 2020, significantly increase the number of cities and human settlements that adopt and implement integrated policies and plans to promote inclusion, efficient use of resources, mitigation of climate change and adaptation to it and resilience to disasters.	The CSMSs are intended to meet a need, have a social vocation and seek to go where the conventional currency does not go for various reasons. In particular, regional currencies seek to mobilize underutilized regional resources to meet needs in the region [35,54]. They aim to contribute to strengthening the monetary system through duality and complementarity to promote resilience in regions, thus having the potential to be instruments that can be used to articulate measures to promote inclusion with ecological values and can improve the acquisition capacity of the population by making more financial resources available.
12. Ensure sustainable consumption and production patterns.	12.2 By 2030, achieve sustainable management and efficient use of natural resources. 12.5 By 2030, significantly reduce waste generation through prevention, reduction, recycling and reuse activities. 12.b Develop and apply instruments to monitor the effects on sustainable development to achieve sustainable tourism that creates jobs, promoting local culture and products.	The territoriality of CSMSs is one of its most significant features [55], and this condition is repeated in the various experiences of the launched CSMSs. This feature encourages people in the community to acquire locally produced goods and services that can be acquired within the network of use, thereby encouraging sustainable economic activity [47] by saving, for example, transport and pollutant costs. This can contribute to generating more sustainable forms of production and consumption.
15. Sustainably manage forests, combat desertification, halt and reverse land degradation, halt biodiversity loss.	15.9 By 2020, integrate ecosystem and biodiversity values into planning, development processes, poverty reduction strategies and national and local accounting.	CSMSs can be designed to meet ecological or cultural needs. One example of this is regional currencies such as regional initiatives, with their objectives including preserving local identity and thus also their natural environment, fostering bio-agriculture [35] and sustainable production and consumption, which contribute positively to environmental care. In addition, CSMSs can be designed to address other wealth indicators, such as the SOL social currency, the conception of which took into account the need to experience a currency that "fosters solidarity and environmentally responsible behavior" [35].
16. Promote just, peaceful and inclusive societies.	16.7 Ensure the adoption of inclusive, participatory and representative decisions at all levels that respond to needs. 16.b Promote and apply non-discriminatory laws and policies in favor of sustainable development.	CSMSs can be tools to promote democratic and representative citizen participation in decision-making, to build a social consensus on the use, management and evaluation of these CSMSs, and to make available resources that will help empower the most vulnerable segments of the population.
17. Revitalize the global partnership for sustainable development.	17.14 Improve policy coherence for sustainable development. 7.17 Encourage and promote the establishment of effective alliances in the public, public–private and civil society spheres, taking advantage of the experience and strategies for obtaining resources from the alliances.	The successful implementation of a social and solidarity currency depends largely on the consensus between the various actors Dini and Kioupkiolis [2,56] and Fare [14]. The public administration, the private sector, the social and solidarity economy and citizenship, have a major tool in the CSMSs to create synergies that contribute to the cohesion of social fabric through active participation, as well as aligning plans and policies around a holistic vision of sustainable development.

Source: Authors based on the UN [7].

3.2. SDGs, CSMSs and Cities

We live in an increasingly urbanized society; more than half of the world population lives in cities, and this figure is expected to increase to 60% by 2030 [57]. Cities are drivers of growth, contributing approximately 60% of the world's GDP, but they are also responsible for most of the world's carbon emissions and use more than half of the natural resources [57]. For all these reasons, cities face great challenges, which do not have a single solution, but rather a necessary series of joint actions that, at a global and local level, contribute to the improvement of social welfare, which is the ultimate aim of urban development policies.

For many cities, resilience strategies represent a useful point of entry to localize SDGs due to their cross-cutting nature. Therefore, it is possible to go beyond the predominant climate approach of other global agreements. In this sense, using the SDGs as a general framework allows the integration of different instruments, policies and strategies, so long as that these are not repeated, contradictory or in conflict with each other [58].

It is possible, therefore, to affirm that cities need the SDGs as a whole to achieve sustainable and sustained development over time as "the problems are interrelated, the solutions to poverty, inequality, climate change and other challenges at the global level are also associated" [57].

The sustainable development of the urban environment is fundamental for the quality of life of citizens. In this sense, the work of local authorities, together with the participation of inhabitants in the planning of cities and human settlements to promote and strengthen social cohesion, the safety of people, the feeling of identity and stimulate innovation and employment, is essential [59].

According to the report of the High-Level Panel of Eminent Persons of the General Secretariat on the Development Agenda of the UN [60], city governments have great problems in urban management, as in cities, there are challenges in poverty, upgrading of slums, solid waste management, service delivery, resource use and planning. Furthermore, these problems will worsen in the coming decades.

A good starting point to contribute to solving these challenges is to give local authorities a more relevant role in setting priorities, executing plans, strengthening local financial systems, monitoring results and involving local governments, companies and local communities since "cities are the place where the battle for sustainable development is won or lost" [60].

All the challenges that we, as species, must face have been exacerbated with the arrival of COVID-19. We are facing unprecedented health, economic and social crises that threaten the livelihoods of millions of people and all the problems are accentuated in cities, which have been the areas most affected by this pandemic. Although the Coronavirus affects all people and communities, it does not impact everyone in the same way since it struck the most vulnerable and exacerbated the inequalities that already existed [61].

Consequently, it is time to strengthen collective actions to achieve rapid health, economic and social recovery, but the actions must be safe, sustained and sustainable at the same time. Recovery cannot be at any cost. Therefore, the roadmap set by the 2030 Agenda and the important existing challenges before the pandemic cannot be forgotten, and it is necessary to commit to sustainable development and resilience as an alternative to the crisis [62].

Within this framework, to achieve the goals of the 2030 Agenda, particularly those related to SDG 11, both sustainable development and urban resilience continue to be strategies to follow at the local level. Although they are different paradigms, both must be closely related. If sustainability is about the impact of human actions on the environment, resilience prepares us to resist the reactions of the environment. Sustainability must be resilient, and resilience must be sustainable [63,64]. In the same way, decent work must be a cross-cutting element in local development strategies, as decent work is a driver of sustainable development by itself [65].

However, as Seyfang and Longhurst suggest [25], CSMSs may have the potential to generate sustainable development benefits and, therefore, to be effective in achieving SDG in cities. However, this needs to be further developed in the study of the diversity of instruments that shape the CSMSs in order to identify how these can better develop their potential to achieve the SDG [25]. In this regard, research by [17] demonstrates the usefulness of CSMSs in promoting sustainable local development in small cities in southern Spain.

This research, in order to contribute to the intention of further studies, deals with these subjects under the following headings, as CSMSs can contribute to building sustainable and resilient cities.

3.3. How to Contribute to the Construction of Sustainable and Resilient Cities through CSMSs

How can we contribute to making cities more resilient and sustainable spaces? What the mechanisms of social, political and economic intervention can become part of the solutions instead of being part of the problems? These questions can be answered from different perspectives. For instance, an answer to these questions can be offered from the promotion of decent work to the proposals formulated around a universal basic income [66–68]. More generally, the field of social innovation has also tried to provide different solutions [5,6]. Other forms of contribution can come from the public sector, from the private sector, and within the latter, the social and solidarity economy plays a special role in building more sustainable and resilient societies [7]. This research, according to its objective, focuses the debate on the role that social and complementary currencies can have as a catalyst instrument in cities.

(a) Public Sector Contribution

Public Sector contribution is essential to achieving the goals of the 2030 Agenda, as we live in a society with various levels of government structures, and each of these has a shared responsibility in the commitment acquired at the global level to meet the SDGs. Such is the importance of the commitment of this collective local response that if it does not promote the active participation of local actors, the achievement of 65% of the SDGs could fail [69].

In this respect, Kanuri et al. [21] point out that the implementation of the SDGs must be done at the local level, and for this the SDGs localization is necessary, being nothing other than decentralization in the implementation of the national strategies or the design and implementation of SDGs goals at the local level, at the initiative of the local government itself, but always in coordination with the different levels of government. This localization process includes two steps [21]: first, plan and implement the SDGs, referring to the process by which the local government defines, plans and implements the strategies to achieve the goals of the SDGs in the defined territorial scope; and second, to track the progress made in the SDGs, with geographically and demographically disaggregated data. This is a critical point for a successful implementation.

The SDGs aspire to be a political agenda for local leaders who aim to achieve more sustainable and resilient cities; however, to start implementing the SDGs in a city, it is necessary to (1) start a process of inclusion and citizen participation that generates awareness and involves all local stakeholders in the achievement of the SDGs' objectives and goals; (2) set the local SDGs agenda, adapting them to local peculiarities and ensure they are ambitious, but realistic; (3) plan the implementation of the SDGs with reachable objectives for the achievement of social, economic, environmental and governance goals; (4) keep evaluating and monitoring to ensure that the implementation of the plan does not suffer deviations, and develop a high capacity to detect these deviations and correct them, fostering a culture of accountability [21].

However, local governments must cease to be mere implementors of development plans defined by other entities. Local authorities, together with local communities, must become the ones who define sustainable local development strategies, leading and channeling the shared responsibility of the economic, social and civil agents of a locality. They must, in turn, manage their implementation, monitoring and control to make the necessary adjustments that guarantee the achievement of the defined objectives. An example of this can be the promotion of a local financial system that, by using a complementary currency as a payment instrument, makes it possible to boost the local economy [34,70].

(b) Private Sector Contribution

From the moment that the United Nations approved the Millennium Declaration [20], the requirements for the business sector to help define a more sustainable future has not ceased. For this purpose, in 2000, the United Nations promoted the creation of the UN Global Compact, an initiative from which a global alliance was created so that companies could get involved in the global mission of achieving the objectives set in the Millennium Declaration.

However, it seems that this effort has not been enough. There have been many instances, including the ones that the United Nations incorporated through the 2030 Agenda [7], which have asked for a greater contribution and effort on the part of companies to achieve a sustainable development model.

Today, beyond the general framework stated by the UN Global Compact, in which many companies—especially large ones—participate through ratification and commitment to its ten principles (Table 2), collective and business efforts must be oriented towards other models of production and consumption [71,72].

Table 2. UN Global Compact ten principles.

Principles	Action Areas
Businesses must support and respect the protection of fundamental human rights, internationally recognized, within their sphere of influence.	Human Rights
Businesses must ensure that their companies are not complicit in human rights abuses.	
Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining.	Labor
Businesses should support the elimination of all forms of forced or compulsory labor.	
Companies should support the effective abolition of child labor.	
Businesses should support the abolition of discriminatory practices in employment and occupation.	
Businesses must maintain a precautionary approach that favors the environment.	Environment
Businesses should encourage initiatives that promote greater environmental responsibility.	
Businesses must favor the development and diffusion of environmentally friendly technologies.	
Businesses must work against corruption in all its forms, including extortion and bribery.	Anti-Corruption

Source: [73].

In this respect, facing the unsustainable dynamics of the linear economy are those other "circular-nature" dynamics, in which the objective is to redefine manufacturing procedures—reducing the consumption of raw materials, lengthening the useful life of goods and promoting local consumption; thus, redefining the approach to economic development [74].

The Ellen Macarthur Foundation (EMF), a foundation created in 2010 that groups governments, companies and academics among its partners, and whose objective is to contribute to accelerating the transition to the circular economy at a global level, stated that the circular economy model builds economic, natural and social capital, focusing, hence, on positive benefits for the entire society [75].

The transition towards a circular economy is not only essential, as the European Commission points out, "to comply with the program of efficiency in the use of resources established following the Europe 2020 Strategy for smart, sustainable, and inclusive growth" [76], but also, in line with what is set in the 2030 Agenda for Sustainable Development, particularly in Goal 12, it constitutes a first-order strategy to enable societies and cities to achieve, definitively, the paradigm of sustainability [71,77–79].

The circulation of complementary social currencies as part of a local financial system can reinforce the meaning and the true nature of a circular economic model. Among others, a complementary social currency favors the consumption of local goods and services, thus reducing the impact on the environment and favoring sustainability [16,80].

(c) Social Economy Contribution

The UN highlights the importance of social economy agents as members of the private sector in achieving the SDGs [7]. In this regard, the United Nations Inter-Agency Working Group on Social and Solidarity Economy considers that the social and solidarity-based economy (SSE) can play an important role in achieving the SDGs through inclusive and sustainable development through its practices and social innovations, offering an alternative to exclusive and unsustainable practices, especially at the local level, since most SSE initiatives are based on the local economy. Likewise, they underline the importance of the holistic approach to address the implementation of the SDGs, adding that integrated and balanced sustainable development (social, economic and environmental) are the central planks of what has come to be named the social and solidarity economy [81].

The European political agenda, aligned with the SDGs, marks the line to be followed by the different public policies of the Member States and among these objectives are those of ending poverty, achieving decent work and reducing inequalities. Thus, the social economy is entirely consistent with these objectives, due to its nature, where people are the center of the organization of work, empowering them to achieve their goals, and, additionally, participation helps them to create a strong identity of belonging [82].

The main aim of the SSE is not the maximization of economic profit at all costs. The SSE also seeks social balance, being an agent that promotes economic sustainability, business competitiveness compatible with decent and inclusive work and local development, generating territorial dynamization and correcting economic and social inequalities.

One example of this can be found in work cooperatives: cooperative work is characterized by high security, a great capacity for resilience in times of crisis and a narrow wage gap between management positions and the rest of the members. Thus, in a study carried out on people who work in cooperatives, it was concluded that the feeling about the work of these people is "a combination of economic rationality, search for efficiency, shared flexibility, sense of participation, a family type environment, pride and reputation, a strong sense of identity, and a focus on values" [83].

The SSE aims to be a first-class tool in meeting the needs of goods, services, employment and financing; respecting and promoting, in turn, the sustainable use of resources, the generation of social benefits, encouraging active citizenship, democratic participation and social inclusion.

There is no doubt about the concordance between the principles and values of the SSE and complementary social currencies. Complementary social currencies can be a first-order instrument for the SSE to further deepen its social function. In turn, SSE companies can represent catalytic agents for the use and promotion of social currencies [22,84,85].

(d) Social Innovation Contribution

The social innovation concept is a source of debate in the scientific field [86–88], framing the concept of social innovation as the result of collective learning that offers unique solutions to satisfy social demands and needs, and in which social actors participate with shared objectives, and seek to contribute to social cohesion.

In this spirit, the European Commission, in its Guide to Social Innovation, defines it as the development and implementation of new ideas to satisfy social needs and the creation of new collaboration ties, answering the new demands of society to improve human well-being. These are social innovations both in their means and in their ends, and they improve the ability of individuals to perform. These come from the action of citizens, local communities as a group, social organizations, companies and the public sector [89]. It is this social innovation of citizen action, of the spontaneous popular initiative—to which the European Commission refers—that deserves special attention, to promote initiatives led by the community, "from the bottom up", as a driving force of local development.

Social innovation is also found in cities as spaces where most individuals coexist and where urban problems are exacerbated [87]. Thus, urban gardens self-managed by communities, community barter market initiatives (an example of complementary currency) or social markets can be examples of social innovation initiatives that, arising in times of crisis, tried to satisfy community needs, such as organizing shopping, care for the elderly or distributing food. All of these can be examples of community leadership and empowerment that strengthen urban resilience processes and turn local communities into agents of their change [90].

To achieve all the above, the definition of strategies that make it possible is required, at the local level, to implement CSMSs that provide the local financial system with payment instruments capable of promoting sustainable development and urban resilience processes. In this regard, Lenis et al. [91] suggest four strategies aimed at achieving these goals: (1) build a social, economic and political consensus; (2) creation of a community observatory of the CSMSs; (3) definition of communication tools for raising awareness and ethical finance education; (4) encourage the alignment of the CSMSs with sustainable local development strategies.

We need a set of strategies that seek not only to define CSMSs capable of promoting local human development but also to create CSMSs which, in themselves, reach the range of a common good. From the common good status, CSMSs should be encouraged together with SMSCs, with values such as democracy, solidarity, reciprocity or participation [92] to encourage another type of social and solidarity economy [93].

As Meyer and Hudon [93] argue, CSMSs can make finances, in this case, local finances, reach not only the orbit of the profit economy but also a form of local financial systems to take values that such as reciprocity to promote a social and solidarity economy where people are at the center of decisions.

4. Conclusions

Complementary social, monetary systems can make cities and territories stronger, more resistant and better able to absorb the effects of crises. Their goal, therefore, is to get the most out of a medium, such as social and complementary currencies, to achieve an aim.

Complementary social, monetary systems can be an instrument that the public sector, the private sector, the social and solidarity economy, and social innovation can use to help to create a new paradigm of more sustainable and resilient cities. In this regard, this research wants to be a practical contribution to highlight the role that each of these sectors can develop.

Thus, the public sector, as a social and economic dynamizing agent, can promote and support the use of a CSMS in a territory as part of the local financial system, contributing to the inception of a virtuous cycle that will also have a direct impact on the creation of employment due to the promotion of the economic activity. Likewise, the public sector can also use the CSMSs as an element of reinforcement of guaranteed work—an example of this can be found in the experience of the CSMSs Bristol Pound—and as a factor of inclusion in the economic environment of the locality for the unemployed.

For its part, the private sector can employ the use of a social and complementary currency to revitalize local consumption, favoring the creation of broad use networks. Likewise, it is possible to create an economic cycle in which not only the payment of clients in the official currency is accepted, but the complementary currency is also accepted, and this complementary currency can be used to pay suppliers, and with the support of the public sector, allowed in payment of local taxes.

From the scope of the social economy, it is also possible to use this type of social medium of payment for the contribution of building more sustainable and resilient territories. In this sense, savings and credit cooperatives could be entities that put into circulation and guarantee the convertibility of a CSMS, rethink economies, deepen values and achieve the objectives of the social economy in pursuit of local development.

Social innovation is essential in the construction of the paradigm of sustainable and resilient cities. Thus, this typology of cities has the potential to involve not only the inhabitants of the territory but also to turn them into real protagonists. Local barter markets are an example of social innovation within the CSMS range for local development. An example of the above is the nodes of Argentina that emerged as a self-managed response by the population to a deep process of the economic crisis that the Latin American country was going through.

In future research, it is proposed to measure the impact of the social currencies already implemented in different territories, the design of social currencies with the specific purpose of creating and improving employment and the use of social currencies in the tourism sector.

At a time now when, as a consequence of the global pandemic caused by COVID-19, a social and economic crisis threatens to shake the well-being of millions of people, it seems necessary to redouble all efforts to offer innovative solutions that, in the case of cities and without abandoning the path of sustainable development set by the 2030 Agenda, not only help to overcome a crisis, but also provoke the social and economic transformation necessary to build another possible world.

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Appendix A

Table A1. Main complementary monetary systems definitions.

Author/s	Definition	Source
Tibbett (1997)	The common element of these (alternatives currencies) systems is that they all seek to overcome the perceived inadequacies of official currencies by supplementing or circumventing them. There are two main ways by which they seek to achieve this goal: Complementary currencies that seek to reinforce a flawed official exchange system; and local currencies, which attract money within a closed circulation scheme, stimulating local commerce. Some of these systems are introduced in times of crisis and others to reform the existing monetary system.	[94]
Blanc (1998)	Parallel currencies are defined as collect units other than national collection units. These mediums of payment differ from national ones as they are mediums of payment that have a power of legal liberation, a guarantee of convertibility in central currency, and that are issued under a certain control of the national monetary authority. Parallel currencies are, therefore, monetary instruments that the actors use to collect and/or pay.	[95]
Lietaer (1999)	A complementary currency refers to an agreement within a community to accept a non-national currency as a medium of payment. They are named complementary because their intention is not to replace the conventional national currency but to perform social functions that the official currency was not designed to fulfill. It is also complementary because most of the participants use it in parallel with the national and the complementary currency.	[27]
OECD (2002)	Community money, controlled by users rather than the banking system and the monetary authority, it is believed to unlock the "real" human and social capital of people rendered powerless by the lack of monetary income from the formal capitalist economy and their banking system.	[96]
Primavera (2004)	Social currency is the one created, administrated and regulated by human groups and communities that create it as an instrument of exchange.	[42]
Albuquerque (2004)	Social currency, in a broad sense, is the fiduciary instrument (of trust), used by one or more people and/or group(s) that exercise(s) the functions of a value unit, that can circulate freely in a community, and it is accepted as a medium of payment; its nominal value is not equal to the intrinsic value but depends on the trust of those who receive or use it; therefore it cannot be used as an instrument for accumulating the wealth produced by individuals or the community.	[97]
Hao et al. (2005)	Alternative currencies are currencies issued by individuals or entities other than national governments to improve the economic well-being of individuals by promoting new commercial relationships.	[98]

Table A1. *Cont.*

Blanc (2006)	The most widely used term in English is "community currency," and the associated devices are classified as "community monetary systems" (with the common acronym "CCS"). [. . .] The reference to the community points, broadly speaking, to the small size of the devices, as well as a "closed manner" organization (in the sense that the use of money presupposes a formal membership process beforehand).	[40]
Plasencia and Orzi (2007)	Social currency: currency in which the "medium of exchange" function has preference over the others, which hoarding is especially discouraged, aiming the creation of a non-capitalist currency.	[99]
Gisbert Quero (2010)	Social currencies are those created by the communities themselves as a medium of exchange with equivalents that can range from equating to the same value as the official currency in its simplest format to a basket of basic products or even conversions with energy units or using time as the only unit of assessment.	[100]
Wrigh (2011)	A complementary currency is an agreement to use something other than legal tender as a medium of exchange to link unmet needs with resources that otherwise would not be used.	[101]
Breitstein and Dini (2012)	Community currencies are a type of local currency, which serves to complement a national currency to stimulate a local economy.	[102]
Boonstra et al. (2013)	Complementary money could be an instrument for change in the economic and social domain. It can stimulate the exchange of goods of individuals and companies that, "without that alternative money, would not happen". An additional medium of commerce can contribute to a strong and resilient economy. The supplemental money has the potential to strengthen local communities by improving relationships, and offering an alternative reward for services, enhancing local identity.	[103]
Seyfang (2000, 2009) Seyfang and Longhurst (2013)	Complementary currency is a generic term for the wealth of contemporary alternative exchange systems that exist alongside standard money in response to social, economic and environmental needs in the form of skill exchanges, modern barter, ecological versions of supermarket loyalty schemes and even bills and coins. Its purpose is to provide some kind of medium of exchange and to create new "value flows". Complementary currencies offer an opportunity for localities to develop self-sufficiency and to isolate themselves somewhat from the impacts of exogenous speculative financial investment on the specific realities of production, employment, consumption and local social relations.	[25,36,104]
Lietaer and Dunne (2013)Lietaer and Kennedy (2010)	A complementary currency is a type of currency that allows combining an unsatisfied need in Euros and an underutilized resource—and adds in the definition of community currency: within a specific geographic area, business or segment of society (community). Most of the complementary currencies do not have commercial objectives. For this reason, they have sometimes named community, social, solidarity or even regional or local currencies. The aim of these currencies is not to supplant the official ones but to coexist with them, which is precisely why they are called complementary coins.	[24,35]
Lipkis and Roth (2014)	Alternative currency is a privately developed type of money that is used as a substitute for the national currency in designated areas.	[105]
North (2014)	"Alternative" currencies as alternatives to money created by states, through which communities could establish greater control over their economic activities. A local currency would be an instrument for local resilience that would allow communities to create an "oasis" of neoliberal economic globalization in a crisis.	[38]
Peacock (2014)	A complementary currency is defined as a monetary unit that expresses the value of goods and services, whether it takes a physical form or not. These are not issued by a sovereign government. The exchange of a complementary currency from one person to another is how payments are made in transactions expressed in complementary currencies.	[106]
Rivero Cuadrado and González Palanco (2015)	Community currencies correspond to Local Exchange Trading Systems (LETS), where the currency is inherent to the exchange. This system is based on an indirect barter network that allows users to exchange goods and services within a community. The complementary currencies correspond to more classic types of coins, which are put into circulation within a specific territory and are capable of being used by anyone who is within it and wants to accept it (a network of partnerships, groups, businesses, etc.).	[107]
Roux (2015)	A complementary currency is a currency that will be exchanged only in a limited geographic area. It works as a complement to the national currency with local characteristics (for example, it promotes another form of consumption), and its objectives are usually to defend the principles of the social economy and promote the social links between close people. Without legal tender, it cannot be the subject of speculation.	[108]

Table A1. *Cont.*

Pak Nian and Lee (2016)	Alternative currencies refer to a medium of exchange other than fiat currency.	[109]
Diniz et al. (2016)	Designed to be a payment instrument with circulation restricted to a particular geographic region, social currencies are used by community banks to finance small economic activities within the community in which they circulate, with a focus on fostering local development and transformation by protecting its economy and local cultural processes.	[46]
Lucarelli and Gobbi (2016)	"Unofficial" currencies have many adjectives such as complementary, parallel, focused, local, social, mutual aid and cooperative or communities. They are complementary (and parallel) because they do not replace official money but circulate alongside it for specific purposes. They can be named local since they generally circulate in a defined territory and respond to the particular needs of a given community. Therefore, they satisfy certain social needs by providing the purchasing power necessary to participate in productive activities, create employment and purchase goods and services. They are also named mutual aid currencies because they can be used to fund nonprofit organizations. Finally, they have named cooperatives (or communities) when they represent the labor and social cooperation of community members.	[110]
Fare and Ahmed (2018)	A "complementary currency system" is a specific account unit (or system) that complements the official currency and has been developed by a local network for accounting and regulating exchanges of goods and services. They fulfill the primary functions of money used as a medium of exchange and unit of account within a defined geographic region or community, and in many cases, also as a store of value.	[41]
Cohen (2017)	Altcoins could be seen as a manifestation of a social movement, a resistance against the perceived evils brought about by free trade, nation-building, and, recently, the increasing automation of work that is leading to a considerable increase in "self-employment" labor and the "on-demand" economy.	[111]
Fernández-Pacheco Sáez (2018)	Regional currency as any complementary currency whose objective is to meet the unmet needs in (conventional currency) in the region and that mobilizes insufficiently used regional resources. The regional currency format is complementary, without pretending to replace the Euro or other conventional currencies, but to complement them to create a dual monetary system that favors the resilience of the regions.	[54]
Meyer and Hudon (2018)	The notion of complementary currencies refers to the monetary systems that complement the national or transnational official currencies. They are legal tender in defined communities, whether ad hoc or territorial, and are created and issued by citizens, nonprofit organizations, companies and even local public administrations. They serve to exchange goods and services that are sometimes not valued by the market-driven pricing system. Therefore, they are often developed to respond to societal needs and aspirations that official currencies do not address. For example, they can be designed to promote sustainable behavior, build community social capital and foster local trade and development.	[51]
Sartori (2018)	Complementary currencies are monetary networks that use a specific medium of exchange to complement, not replace, the national currency.	[112]
Caravaca Barroso and González Romero (2019)	Social currencies are intended to serve as a unit of exchange and assign value to the goods and services exchanged. This creates money for a local environment that, in addition to being based on relationships of trust and reciprocity, is exclusively focused on meeting the needs of people, communities and local environments. They are local currencies and, therefore, of restricted circulation, either to a community or to a territory, which explains the tolerance of the monetary authorities to their issuance.	[45]
Gawthorpe (2019)	The complementary currencies aim to meet socioeconomic goals such as promoting the local economy, civic commitment, community building, supporting local businesses, and, finally, the intention of providing aid to marginalized groups. The currencies are not intended to compete with a national currency for a better provision of these functions.	[43]

Source: Authors.

References

1. Chesbrough, H. To recover faster from Covid-19, open up: Managerial implications from an open innovation perspective. *Ind. Mark. Manag.* **2020**, *88*, 410–413. [CrossRef]
2. Dini, P.; Kioupkiolis, A. The alter-politics of complementary currencies: The case of Sardex. *Cogent Soc. Sci.* **2019**, *5*, 1–21. [CrossRef]
3. Gómez Calvo, V.; Gómez-Álvarez Díaz, R. The economy for the common good and the social and solidarity economies, are they complementary? *CIRIEC Esp. Rev. Econ. Públ. Soc. Coop.* **2016**, *87*, 257–294.

4. Gómez-Álvarez Díaz, R.; Morales Sanchez, R.; Rodriguez Morilla, C. The Economy for the Common Good at a Local Level. *CIRIEC Esp. Rev. Econ. Públ. Soc. Coop.* **2017**, *90*, 189–222. [CrossRef]
5. Cajaiba-Santana, G. Social innovation: Moving the field forward. A conceptual framework. *Technol. Forecast. Soc. Chang.* **2014**, *82*, 42–51. [CrossRef]
6. Phills, J.A.; Deiglmeier, K.; Miller, D.T. Rediscovering social innovation. *Stanf. Soc. Innov. Rev.* **2008**, *6*, 34–43.
7. United Nations. *Resolution 70/1. Transforming Our World: The 2030 Agenda for Sustainable Development*; United Nations-General Assembly: New York, NY, USA, 2015.
8. International Labour Organization (ILO). *Decent Work and the 2030 Agenda for Sustainable Development*; International Labour Organization (ILO): Geneve, Switzerland, 2017.
9. Dempsey, N.; Bramley, G.; Power, S.; Brown, C. The Social Dimension of Sustainable Development: Defining Urban Social Sustainability. *Sustain. Dev.* **2011**, *19*, 289–300. [CrossRef]
10. Hornborg, A. How to turn an ocean liner: A proposal for voluntary degrowth by redesigning money for sustainability, justice, and resilience. *J. Polit. Ecol.* **2017**, *24*, 623–632. [CrossRef]
11. Sharma, V.R.; Verma, C. Perspective on Resilient Cities: Introduction and Overview. In *Making Cities Resilient*; Sharma, V.R., Chandrakanta, Eds.; Springer International Publishing: Cham, Switzerland, 2019; pp. 1–9. [CrossRef]
12. Martin, R.; Sunley, P. On the notion of regional economic resilience: Conceptualization and explanation. *J. Econ. Geogr.* **2015**, *15*, 1–42. [CrossRef]
13. Lietaer, B.; Arnsperger, C.; Goerner, S.; Brunnhuber, S. *Money and Sustainability the Missing Link: A Report from the Club of Rome—EU Chapter to Finance Watch and the World Business Academy*; Triarchy Press: Axminster, UK, 2012.
14. Fare, M. Sustainable territorial development and monetary subsidiarity. In *Monetary Plurality in Local, Regional and Global Economies*; Gómez, G., Ed.; Taylor and Francis: Londres, UK, 2019; pp. 202–233.
15. Seyfang, G. Sustainable consumption, the new economics and community currencies: Developing new institutions for environmental governance. *Reg. Stud.* **2006**, *40*, 781–791. [CrossRef]
16. Seyfang, G.; Longhurst, N. What influences the diffusion of grassroots innovations for sustainability? Investigating community currency niches. *Technol. Anal. Strateg. Manag.* **2016**, *28*, 1–23. [CrossRef]
17. García-Corral, F.J.; de Pablo-Valenciano, J.d.; Milán-García, J.; Cordero-García, J.A. Complementary Currencies: An Analysis of the Creation Process Based on Sustainable Local Development Principles. *Sustainability* **2020**, *12*, 5672. [CrossRef]
18. Sahakian, M. Complementary currencies: What opportunities for sustainable consumption in times of crisis and beyond? *Sustain. Sci. Pract. Policy* **2017**, *10*, 4–13. [CrossRef]
19. Bunge, M. *La Investigación Científica: Su Estrategia y Su Filosofía*; Ariel: Barcelona, Spain, 1980.
20. United Nations. *United Nations Millennium Declaration*; United Nations-General Assembly: New York, NY, USA, 2000.
21. Kanuri, C.; Revi, A.; Espey, J.; Kuhle, H. *Cómo Implementar los ODS en las Ciudades*; Red de Soluciones para el Desarrollo Sostenible (SDSN): Madrid, Spain, 2016.
22. Fare, M.; Ahmed, P.O. Complementary Currency Systems and their Ability to Support Economic and Social Changes. *Dev. Chang.* **2017**, *48*, 847–872. [CrossRef]
23. Wheatley, G.; Younie, C.; Alajlan, H.; McFarlane, E. Calgary Dollars: Economic and Social Capital Benefits. *Int. J. Community Curr. Res.* **2011**, *15*, 84–89. [CrossRef]
24. Lietaer, B.; Dunne, J. *Rethinking Money: How New Currencies Turn Scarcity into Prosperity*, 1st ed.; Berrett-Koehler: San Francisco, CA, USA, 2013; 265p.
25. Seyfang, G.; Longhurst, N. Growing green money? Mapping community currencies for sustainable development. *Ecol. Econ.* **2013**, *86*, 65–77. [CrossRef]
26. Rizzo, P. *L'économie Sociale et Solidaire Face aux Expérimentations Monétaires: Monnaies Sociales et Monnaies Multilatérales*; Harmattan: Paris, France, 2003.
27. Lietaer, B. *The Social Impact of Electronic Money: A Challenge to the European Union?* European Commission's Forward Studies Unit: Brussels, Belgium, 1999.
28. Lietaer, B. *The Future of Money*; Arrow Books Ltd.: Londres, UK, 2002.
29. Lietaer, B.; Kennedy, M. *Monnaies Régionales. De Nouvelles Voies vers une Prospérité Durable*; Éditions Charles Léopold Mayer: Paris, France, 2008.

30. Blanc, J. Unpacking monetary complementarity and competition: A conceptual framework. *Camb. J. Econ.* **2017**, *41*, 239–257. [CrossRef]
31. Gómez-Álvarez Díaz, R.; Rodríguez Morilla, C. Impacto de las monedas comunitarias: Una revisión de la literatura. In *Economía Colaborativa...¿ De Verdad?* Gómez-Álvarez, R., Patiño Rodríguez, D., Plaza Angulo, J.J., Eds.; Laborum: Murcia, Spain, 2018; pp. 167–194.
32. De La Rosa, J.; Stodder, J. On velocity in several complementary currencies. *Int. J. Community Curr. Res.* **2015**, *19*, 114–127.
33. Musyoka, G.N. *Investigating the Impact of Complementary Currencies on Business Growth in Informal Economies: Case of Lindi-Pesa in Lindi, Kibera Slum, Nairobi County*; Strathmore University: Nairobi, Kenya, 2017.
34. Groppa, O. Complementary currency and its impact on the economy. *Int. J. Community Curr. Res.* **2013**, *17*, 45–57.
35. Lietaer, B.; Kennedy, M.; Rocard, M. *Monedas Regionales: Nuevos Instrumentos Para una Prosperidad Sustentable*; La Hidra de Lerna: Almería, Spain, 2010.
36. Seyfang, G. The Euro, the Pound and the Shell in our Pockets: Rationales for Complementary Currencies in a Global Economy. *New Polit. Econ.* **2000**, *5*, 227–246. [CrossRef]
37. North, P. *Money and Liberation: The Micropolitics of Alternative Currency Movements*; University of Minnesota Press: Minneapolis, MN, USA, 2007.
38. North, P. Ten Square Miles Surrounded By Reality? Materialising Alternative Economies Using Local Currencies. *Antipode* **2014**, *46*, 246–265. [CrossRef]
39. Blanc, J. *Parallel Currencies. Historical and Theoretical Approaches*; Université Lumière—Lyon II: Bron, France, 1998.
40. Blanc, J. *Exclusion et Liens Financiers: Monnaies Sociales*; Rapport 2005–2006; Economica: Paris, France, 2006.
41. Fare, M.; Ahmed, P.O. Why are complementary currency systems difficult to grasp within conventional economics? *Rev. Interv. Écono. Papers Polit. Econ.* **2018**, *59*, 1–19. [CrossRef]
42. Primavera, H. Moneda Social I. In *La otra Economía*; Cattani, A.D., Ed.; Altamira Buenos Aires: Buenos Aires, Argentina, 2004; pp. 307–317.
43. Gawthorpe, K. Analysis of the demand for the alternative currency WIR. *Int. J. Monet. Econ. Financ.* **2019**, *12*, 343–360. [CrossRef]
44. Doria, L.; Fantacci, L. Evaluating complementary currencies: From the assessment of multiple social qualities to the discovery of a unique monetary sociality. *Qual. Quant.* **2018**, *52*, 1291–1314. [CrossRef]
45. Caravaca Barroso, I.; González Romero, G. Una mirada alternativa al desarrollo local. Las monedas sociales en la aglomeración urbana de Sevilla. *Scr. Nova* **2019**, *23*, 1–27. [CrossRef]
46. Diniz, E.H.; Cernev, A.K.; Nascimento, E. Mobile social money: An exploratory study of the views of managers of community banks. *Rev. Adm.* **2016**, *51*, 299–309. [CrossRef]
47. Carroll, J.M.; Bellotti, V. Creating Value Together. In Proceedings of the 18th ACM Conference on Computer Supported Cooperative Work & Social Computing—CSCW 2015, Vancouver, BC, Canada, 14–18 March 2015; pp. 1500–1510.
48. Dini, P. *Community Currencies and the Quantification of Social Value in the Digital Economy*; The London School of Economics and Political Science: London, UK, 2012.
49. Ryan-Collins, J. Building local resilience: The emergence of the UK Transition Currencies. *Int. J. Community Curr. Res.* **2011**, *15*, 61–67. [CrossRef]
50. Seyfang, G. Time Banking: A New Economics Alternative. In *Interrogating Alterity: Alternative Economic and Political Spaces*; Fuller, D., Jonas, A.E.G., Lee, R., Eds.; Ashgate: Farnham, UK; Burlington, VT, USA, 2010; pp. 279–295.
51. Meyer, C.; Hudon, M. Money and the Commons: An Investigation of Complementary Currencies and Their Ethical Implications. *J. Bus. Ethics* **2018**, *160*, 277–292. [CrossRef]
52. Amato, M.; Fantacci, L. Failures on the market and market failures: A complementary currency for bankruptcy procedures. *Camb. J. Econ.* **2016**, *40*, 1377–1395. [CrossRef]
53. Kim, S.M.; Lough, B.; Wu, C.-F. The conditions and strategies for success of local currency movements. *Local Econ.* **2016**, *31*, 344–358. [CrossRef]
54. Fernández-Pacheco Sáez, J.L. *Estrategias de Desarrollo Local Frente a la Crisis en Entornos Rurales Vulnerables: Una Comparativa de Casos Entre Sudáfrica y España*; Universidad Complutense de Madrid: Madrid, Spain, 2018.
55. Reppas, D.; Muschert, G.W. The Potential for Community and Complementary Currencies (CCs) to Enhance Human Aspects of Economic Exchange. *Digithum* **2019**, 1–11. [CrossRef]

56. Dini, P.; Kioupkiolis, A. Community currencies as laboratories of institutional learning: Emergence of governance through the mediation of social value. In Proceedings of the Inaugural WINIR Conference, London, UK, 11–14 September 2014.
57. United Nations. *The Sustainable Development Goals Report 2019*; United Nations: New York, NY, USA, 2019.
58. Croese, S.; Green, C.; Morgan, G. Localizing the sustainable development goals through the lens of urban resilience: Lessons and learnings from 100 resilient cities and cape town. *Sustainability* **2020**, *12*, 550. [CrossRef]
59. Almahmoud, E.; Doloi, H.K. Identifying the key factors in construction projects that affect neighbourhood social sustainability. *Facilities* **2020**, *38*, 765–782. [CrossRef]
60. United Nations. *A New Global Partnership: Eradicate Poverty And Transform Economies Through Sustainable Development-The Report of the High Level Panel of Eminent Persons on The Post-2015 Development Agenda*; United Nations: New York, NY, USA, 2013.
61. United Nations. *The Sustainable Development Goals Report 2020*; United Nations: New York, NY, USA, 2020.
62. Mushir, S. Urban Resilience Planning: A Way to Respond to Uncertainties—Current Approaches and Challenges. In *Making Cities Resilient*; Sharma, V.R., Chandrakanta, Eds.; Springer International Publishing: Cham, Switzerland, 2019; pp. 141–162.
63. Romero-Lankao, P.; Gnatz, D.M.; Wilhelmi, O.; Hayden, M. Urban Sustainability and Resilience: From Theory to Practice. *Sustainability* **2016**, *8*, 1224. [CrossRef]
64. Seeliger, L.; Turok, I. Towards Sustainable Cities: Extending Resilience with Insights from Vulnerability and Transition Theory. *Sustainability* **2013**, *5*, 2108–2128. [CrossRef]
65. Poschen, P. *Decent Work, Green Jobs and the Sustainable Economy Solutions for Climate Change and Sustainable Development*; International Labour Organization: Geneva, Switzerland, 2015.
66. Ruckert, A.; Huynh, C.; Labonte, R. Reducing health inequities: Is universal basic income the way forward? *J. Public Health* **2018**, *40*, 3–7. [CrossRef] [PubMed]
67. Van Parijs, P. The Universal Basic Income: Why Utopian Thinking Matters, and How Sociologists Can Contribute to It. *Politics Soc.* **2013**, *41*, 171–182. [CrossRef]
68. De Wispelaere, J.; Stirton, L. The many faces of universal basic income. *Polit. Q.* **2004**, *75*, 266–274. [CrossRef]
69. Cities Alliance. Sustainable development goals and habitat III: Opportunities for a successful New Urban Agenda (3). In *Cities Alliance Discussion Paper*; Cities Alliance: Brussels, Belgium, 2015.
70. Blanc, J.; Fare, M. Understanding the role of governments and administrations in the implementation of community and complementary currencies. *Ann. Public Coop. Econ.* **2013**, *84*, 63–81. [CrossRef]
71. Bengtsson, M.; Alfredsson, E.; Cohen, M.; Lorek, S.; Schroeder, P. Transforming systems of consumption and production for achieving the sustainable development goals: Moving beyond efficiency. *Sustain. Sci.* **2018**, *13*, 1533–1547. [CrossRef]
72. Veleva, V.; Bodkin, G. Corporate-entrepreneur collaborations to advance a circular economy. *J. Clean. Prod.* **2018**, *188*, 20–37. [CrossRef]
73. United Natons Global Compact. The Ten Principles of the UN Global Compact. Available online: https://tinyurl.com/om3arwj (accessed on 4 October 2020).
74. Pearce, D.W.; Turner, R.K. *Economics of Natural Resources and the Environment*; Harvester Wheatsheaf: Hertfordshire, UK, 1990.
75. EMF. Circular Economy Overview. Available online: https://goo.gl/ZckRpG (accessed on 4 October 2020).
76. European Union. *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. Towards a Circular Economy: A Zero Waste Programme for Europe*; COM: Texas City, TX, USA, 2014.
77. Masi, E.; Rizzo, A.; Regelsberger, M. The role of constructed wetlands in a new circular economy, resource oriented, and ecosystem services paradigm. *J. Environ. Manag.* **2018**, *216*, 275–284. [CrossRef] [PubMed]
78. Schroeder, P.; Anggraeni, K.; Weber, U. The Relevance of Circular Economy Practices to the Sustainable Development Goals. *J. Ind. Ecol.* **2019**, *23*, 77–95. [CrossRef]
79. Aguinaga, E.; Henriques, I.; Scheel, C.; Scheel, A. Building resilience: A self-sustainable community approach to the triple bottom line. *J. Clean. Prod.* **2018**, *173*, 186–196. [CrossRef]
80. Bazzani, G. Money as a Tool for Collective Action. *Partecip. Confl.* **2020**, *13*, 438–461. [CrossRef]

81. United Nations. *Social and Solidarity Economy and the Challenge of Sustainable Development. A Position Paper by the United Nations Inter-Agency Task Force on Social and Solidarity Economy*; United Nations Inter-Agency Task Force on Social and Solidarity Economy: Geneve, Switzerland, 2014.
82. Lenis Escobar, A. La economía social como factor clave para la convivencia intercultural. In *Educación, Sociedad e Interculturalidad*; Osuna Rodríguez, M., Rivera Mateos, M., Eds.; Universidad de Córdoba: Córdoba, Spain, 2019; pp. 32–55.
83. Roelants, B.; Hyungsik, E.; Terrasi, E. *Cooperativas y Empleo: Un Informe Mundial*; CICOPA & Grupo Desjardins: Bruselas, Belgium, 2014.
84. Fare, M. The SOL: A Complementary Currency for the Social Economy and Sustainable Development. *Int. J. Community Curr. Res.* **2011**, *17*, 57–60. [CrossRef]
85. Candelaria Pardo, E. MonedaPAR: An argentine alternative for the social and solidarity economy. *Revesco Rev. Estud. Coop.* **2020**, *135*, 1–12. [CrossRef]
86. Djellal, F.; Gallouj, F. Social innovation and service innovation. In *Challenge Social Innovation*; Howaldt, J., Franz, H.-W., Hochgerner, J., Eds.; Springer: Berlin, Germany, 2012; pp. 119–137.
87. García-Flores, V.; Martos, L.P. Social innovation: Key factors for its development in the territories. *CIRIEC Esp. Rev. Econ. Publica Soc. Coop.* **2019**, *97*, 245–278. [CrossRef]
88. Paz, E.C. Un paradigma emergente: La innovación social. *3C Empresa* **2015**, *4*, 50–68.
89. European Commission. *Guide to Social Innovation*; European Commission: Brussels, Belgium, 2013.
90. Oliván, R.; Horrillo, P. Innovación Abierta contra la pandemia. *Consultor de los Ayuntamientos y de los Juzgados* **2020**, *7*, 20–35.
91. Lenis Escobar, A.; Rueda López, R.; Garcia Guerrero, J.E.; Salinas Cuadrado, E. Design of Strategies for the Implementation and Management of a Complementary Monetary System Using the SWOT-AHP Methodology. *Sustainability* **2020**, *12*, 6849. [CrossRef]
92. Ahmed, P.O. What does 'solidarity economy' mean? Contours and feasibility of a theoretical and political project. *Bus. Ethics Eur. Rev.* **2015**, *24*, 425–435. [CrossRef]
93. Meyer, C.; Hudon, M. Alternative organizations in finance: Commoning in complementary currencies. *Organization* **2017**, *24*, 629–647. [CrossRef]
94. Tibbett, R. Alternative currencies: A challenge to globalisation? *New Political Econ.* **1997**, *2*, 127–135. [CrossRef]
95. Blanc, J. Las monedas paralelas: Evaluación y teorías del fenómeno. In *Sciences de l'Homme et de la Société*; HAL-SHS: Paris, France, 1998.
96. Organisation for Economic Co-operation and Development (OECD). *The Future of Money*; OECD Publishing: Paris, France, 2002.
97. Albuquerque, P. Moneda Social II. In *La Otra Economía*; Cattani, A.D., Ed.; Altamira Buenos Aires: Buenos Aires, Argentina, 2004; pp. 319–328.
98. Hao, Y.; Havey, D.M.; Turner, D.A. An exchange protocol for alternative currencies. *Inf. Technol. Coding Comput.* **2005**, *1*, 420–424.
99. Plasencia, A.; Orzi, R. *Moneda Social y Mercados Solidarios. Potencial Pedagógico y Emancipador de los Sistemas Monetarios Alternativos*; CICCUS: Buenos Aires, Argentina, 2007.
100. Gisbert Quero, J. Economías sin dinero y trabajo sostenible. *Ecol. Polít.* **2010**, *40*, 55–66.
101. Wrigh, F.L. Community Capitalism. In *Creating Wealth Growing Local Economies with Local Currencies*; Hallsmith, G., Lietaer, B.A., Meadows, D., Lovins, L.H., Eds.; New Society Publishers: Gabriola Island, BC, USA, 2011; pp. 43–54.
102. Breitstein, L.; Dini, P. A social constructivist analysis of the 2007 banking crisis: Building trust and transparency through community currencies. *J. Bank. Regul.* **2012**, *13*, 36–62. [CrossRef]
103. Boonstra, L.; Klamer, A.; Karioti, E.; Do Carmo, A.J.; Geenen, S. *Complementary Currency Systems: Social and Economic Effects of Complementary Currencies*; Erasmus Universiteit Rotterdam: Rotterdam, The Netherlands, 2013.
104. Seyfang, G. *The New Economics of Sustainable Consumption*; Palgrave Mcmillan: New York, NY, USA, 2009.
105. Lipkis, S.; Roth, A. What is alternative currency? *World Policy J.* **2014**, *31*, 12–13.
106. Peacock, M.S. Complementary currencies: History, theory, prospects. *Local Econ. J. Local Econ. Policy Unit* **2014**, *29*, 708–722. [CrossRef]
107. Rivero Cuadrado, M.; González Palanco, N. Monedas sociales en Andalucía: Economías de transición. *Inf. Estad. Cart. Andal.* **2015**, *5*, 261–268.

108. Roux, M. Finance Otherwise: The End of Banks? In *Monetary Policy in the Context of the Financial Crisis: New Challenges and Lessons*, 1st ed.; Barnett, W.A., Jawadi, F., Eds.; Emerald: Bingley, UK, 2015; pp. 517–536.
109. Pak Nian, L.; Lee, D.K.C. Introduction to Bitcoin. In *Handbook of Digital Currency: Bitcoin, Innovation, Financial Instruments, and Big Data*; Lee, D.K.C., Ed.; Elsevier: Amsterdam, The Netherlands, 2016.
110. Lucarelli, S.; Gobbi, L. Local clearing unions as stabilizers of local economic systems: A stock flow consistent perspective. *Camb. J. Econ.* **2016**, *40*, 1397–1420. [CrossRef]
111. Cohen, B. The Rise of Alternative Currencies in Post-Capitalism. *J. Manag. Stud.* **2017**, *54*, 739–746. [CrossRef]
112. Sartori, L. Complementary Currencies as Weapons in Times of Financial Instability. In *Critical Junctures in Mobile Capital*; Flam, H., Pixley, J., Eds.; Cambridge University Press: Cambridge, UK, 2018; pp. 282–288. [CrossRef]