

Effects of the Orange Economy on Social Entrepreneurship in the City of Medellin



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Abstract The orange economy, according to the Ministry of Culture, is a tool for social development that integrates the arts, cultural heritage (tangible and intangible), cultural industries, and functional creations toward the social enterprise. It arises as a mandatory bet for the State (which could not take advantage of the oil bonanza of past years to diversify its sources of income) to be able to depend on other items other than taxes to finance itself. The big bet then is to move from dependence on mineral resources of the State (oil, coal, etc.) to depend on the fruits of the exploitation of talent, the revitalization of our cultural heritage, and new technological creations based on social for-benefit organizations. The objective was to identify the effects of the orange economy on social entrepreneurship based on the fourth sector. The research was an in-depth panel interview with three managers who created companies during the last decade focused on social entrepreneurship with an emphasis on technology. The effects of social enterprise function show that passion, simple solutions, optimism, philanthropy, global vision, and the generation of will are the consequences of the orange economy philosophy in the fourth sector. In conclusion, the orange economy within the social innovation based on the fourth sector integrates actions into their business model to create positive impacts on society and the environment. The limits of the study were the effect in the interviews because interviews were done over smartphones on account of COVID-19 and the achievement of the managers concerning the topic of orange economy.

Keywords Orange economy · Social entrepreneurship · Fourth industrial revolution

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1 Introduction

At this time, Latin America is positioning itself in the great potential that the fourth sector of the economy has: in a young region, that has creative skills, that is bold, and that has an entrepreneurial nature. Good development is required, so that the companies of the fourth sector can help to solve the main challenges of the fourth industrial revolution, contributing to the fulfillment of the Objectives of Sustainable Development, according to the commitments of the countries of the world in fulfilling them for the year 2030.

The Ibero-American General Secretariat has been at the forefront of this trend, per the provisions proposed at the last 25th Ibero-American Summit, which was discussed with the Heads of State and Government. The 22 countries of the region that were present at this event agreed that the venture would make it possible to achieve economic growth, transform the productive sectors, and create more inclusive societies to improve the quality of life.

According to an analysis of the figures described by the World Economic Forum, the fourth sector, which is made up of companies that have a vocation to achieve social change or social entrepreneurship, represents 10% of the gross domestic product (GDP), having a rate of 50% of growth in jobs generated by this sector (World Economic Forum 2018), compared to traditional companies in Europe and the United States. The social demands at the base of the pyramid must be perceived as an opportunity for social transformation and income generation. According to the World Economic Forum survey (2018), 93% of managers of large companies value sustainability as the key to success for the future of business.

Colombia, a diverse country of cultures and vast wisdom, promises to improve the reality of entrepreneurship to contribute to a society that has been influenced by drug trafficking. In other words, starting up the past is difficult, but the economic crises of the country, during the years 1990 and 2010, contributed to breaking the paradigms and saving the companies because they became creative. Even so, the organizations must adapt to the circumstances of the environment, but this is configured from the integration of employees and managers. Therefore, economic crises sometimes help to think creatively about the economic and social activities of companies. The question of this article is, what are the effects of the orange economy on social entrepreneurship based on the fourth sector? So, the objective was to identify the effects of the orange economy on social entrepreneurship based on the fourth sector.

The Future Landscapes of the Orange Economy: Creative Pathways for Improving Lives in Latin America and the Caribbean wrote, “dedicated spaces for innovators, entrepreneurs, and events such as hackathons have popped up in urban centers across Latin America and the Caribbean. These forward-looking creative hubs house a new and growing form of business and employment cooperatives that are providing management, administrative support, career services, and other resources necessary for creatives to make a living. They operate as one-stop-shops to amplify creative production and social impact businesses. The popularity of these physical spaces has galvanized autonomous workers to explore novel ways to collaborate for

mutual benefits. Through spreading risks, increasing access to capital, enabling resource sharing, and providing training and upskilling, these new cooperatives are helping diverse professionals with shared values to work in the creative and cultural economy.” (Finlev et al. 2017).

Besides the orange economy configuring to create social impact based on “waste management systems, the main purpose of Pay-As-You-Throw (PAYT) strategies is to support the more sustainable management of waste flows from an economic, social and environmental point of view. This is usually based on the waste hierarchy process to produce lower flows of waste, first by both reducing polluted waste at source and re-using products and, secondly by increasing recycling rates” (Taleb and Al Farooque 2021, p. 124047). Moreover, the findings of the research of Salmenperä show that this can be promoted by illustrating the economic benefits of a circular economy (CE), better sharing of waste-related data, and increasing the dialog and cooperation between key players (Salmenperä et al. 2020). Although the orange economy based on the circular economy is a sequential dynamics process because, first, it helps to adapt the novel concepts in new contexts through the single-agency approach in the early phase, and second, it stabilizes policy outputs gradually to achieve effective outcomes through the multi-actor cooperation in the late phase (Zhao et al. 2020). We emphasize that the implementation strategies to increase economic and environmental gain are based on sharing information (Palmié et al. 2020).

But, Collivignarelli et al. (2020) expressed that managing costs estimation showed that Thermophilic Aerobic Membrane Reactor (TAMR), coupled with a stripping and adsorption system to recover nutrients, is economically sustainable. Besides recycling radius, the minimal unit total cost and recycling rate are elements that help to create susceptibility from an orange economy (Rijal and Lin 2020). On the other hand, the results of this study will help cities take effective steps toward achieving a circular economy and plan for implementing urban mining strategies by recycling waste (Mollaei et al. 2020).

The article is centered on nine topics, with the first topic based on the inquiry of the economic crises as an opportunity. The second topic is based on unemployment in Colombia. The third topic explains the causes for the closure of Colombian companies, the fourth topic elaborates on the theory of orange economy, while the fifth topic describes the relationships between social entrepreneurship and the fourth sector. The sixth topic is composed of Colombia’s National Development Plan and its relationship to the orange economy. The seventh topic explains the methodology used in the research. The eighth topic shows the results and the ninth topic presents the discussion and the conclusion of the research.

2 Economic Crises an Opportunity

The economic crises point to other forms of management, as is the case of “economic development in the city of Milan, the only one of the twelve cities examined that records a positive change in the average values of real estate during the period under

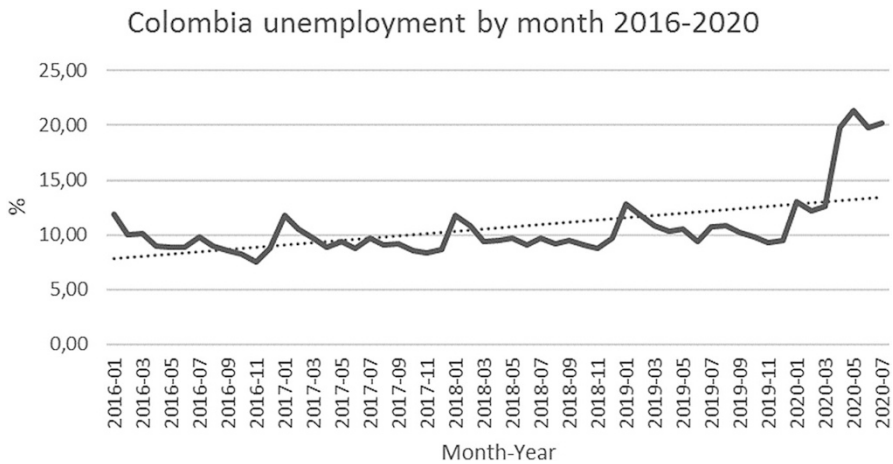
consideration” (Mangialardo and Micelli 2021) by identifying new ways of doing business from the orange economy. At the same time, the thinking of the “neo-institutional framework” linked to the experience contributes to solving moments of crisis (Belle 2021). Also, the measures adopted in Russia in recent times of crisis configured the opportunity to change the legislation (Fadeev 2021) to help companies explore new markets.

3 Unemployment in Colombia

Unemployment is a social impact factor that is measured in economic conditions and not from a humanitarian viewpoint. Therefore, “organizations operate with lower profit margins in times of crisis, suggesting that they adjust their cost structures to recover” (Pamplona et al. 2018, p. 305). In other words, companies leverage their social development, from an economic viewpoint by controlling costs, in which labor is incorporated. In other words, unemployment, sometimes, generates creativity to undertake new business, economic or social.

In Colombia, unemployment, according to the DANE, in recent years averaged 8.56%. “For July 2020, the unemployment rate of the national total was 20.2%, which meant an increase of 9.5 percentage points compared to the same month of the previous year (10.7%). The overall participation rate stood at 56.5%, which represented a reduction of 6.5 percentage points compared to July 2019 (63.0%). Finally, the employment rate was 45.1%, a decrease of 11.1 percentage points compared to the same month in 2019 (56.2%)” (Dane 2020) (see Graph 1).

By 2016, unemployment was 11.91% and during February 2020, it was 12.99%, even so, the State intervenes in the economy to promote the policy of implementing



Graph 1 Unemployment Colombia by month 2016–2020. Source: Author elaboration from data of DANE (2020)

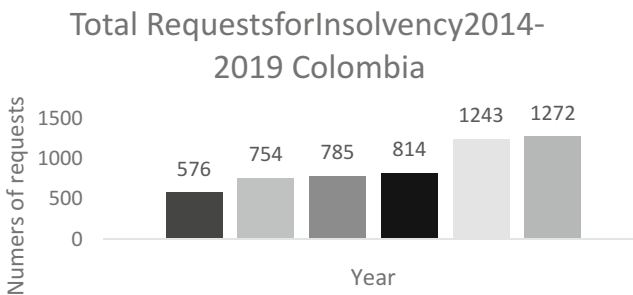
the orange economy program, which is based on creating social, cultural, technological, and music businesses, among others, from the development plan of the Colombian presidency. Consequently, the orange economy approach leverages creativity from seeing difficulties as opportunities, but this is not always the case and generates the closure of companies.

4 Closing of Companies in Colombia

In Colombia, in 2014, 576 companies were closed but at the end of 2019, there were 1272, which generates an increase of 54.71%. In other words, although the macro-economic indicators are favorable, companies are closed, but sometimes they encourage the creation of others, as shown in Graph 2. As of 2020, there were 2788 insolvency proceedings throughout the country with a cut-off to April 2020, that is, companies that do not wish to close and submit to negotiate with their creditors to define strategies to reactivate their corporate purpose; in other words, they seek a second chance and creatively drive new businesses or portfolios.

Even so, the creative way to improve the financial indicators is based on looking for new markets. Therefore, the main importing country in 2009 went to Hong Kong, followed by Tunisia, China, Mexico, Turkey, Italy, United States, Morocco, and Colombia (Sekhar 2010) because they relied on economic, financial, and tax incentives provided by the State.

With the above, this work aims to systematically understand the effects that the orange economy can bring to entrepreneurship as a social necessity for increasing economic and productive standards in small and medium enterprises in the city of Medellín. Therefore, the question asked is, what are the effects of the orange economy in promoting social entrepreneurship and not economic entrepreneurship? In other words, the objective is to identify the effects of the orange economy on social entrepreneurship.



Graph 2 Total insolvency requests 2014–2019 in Colombia. Source: Author elaboration from data of Superintendence of Companies (2019)

5 Orange Economy

However, to understand the realities of the social economy from the perspective of social entrepreneurship, the characteristics of the orange economy are presented. They focus on creativity, art, culture, and entrepreneurship (Gaviria Roa et al. 2019), that is, exclusively from human creativity and imagination (Montaguht et al. 2017) support the creativity of the orange economy but with innovation and reinvention (Lozano 2010). It is clarified that the color orange is associated with culture and creativity, that is to say, it symbolizes ideas from sources of intellectual production.

Additionally, the orange economy is based on socializing the industry's knowledge and exploring this type of innovation in its processes (Silva-Bolivar et al. 2019) to improve financial and social indicators; at the same time, it contributes to discovering the reality of new environments from the creativity. Also, it is to take advantage of dynamic, symbiotic, socially balanced spatial and cultural systems, in which democratic and spontaneous dynamics are developed in cultural museums (Padilla-Llano et al. 2020) because they contribute to creating cultural aspects. In the same way, the "citizen science 2.0" and "open science" optimize the digital assets linked to the so-called orange economy, as a continuous exchange of ideas and visions of the future (Santagati et al. 2019). In other words, the orange economy is based on the creative exchange of ideas that contribute to making society better. However, the National System of Science, Technology, and Innovation's (SNCTI's) policies in Colombia leverage development with criteria of productivity and competitiveness in the global framework of creative and cultural culture (Estévez et al. 2018). In other words, the orange economy is configured in opportunities from cultural development with a social focus that promotes entrepreneurship.

The orange economy promotes social entrepreneurship by incorporating new forms of financing such as Crowdfunding, which is a way of seeking financing for an idea, business, or entrepreneurship by those who are seeking funding to make public the idea on a public platform on the Internet through different users bringing small sums of money to achieve the target (Vega-Muñoz et al. 2019). Also, the social entrepreneurship gathers an impact on the economy because it creates new business, new jobs, distinguishes opportunities where someone else views it (Kazmi et al. 2016), and identifies new pathways to sustainable development (Marvin 2019).

Trapp (2015) expressed the most significant challenges that creative enterprises face are: "lack of entrepreneurial knowledge or know-how regarding business plan development, forecast modeling, distribution networks, and intellectual property protection lack of proper mentoring by industry-specific professionals and seasoned entrepreneurs problems gaining access to growth capital to manage cash flow, build the means of production, and cover the deficits a firm incurs enrooted to sustainability lack of proper infrastructure" (p. 5). Besides, we need to return to the earlier concerns of "culture and development" (O'Connor 2019) to provide the orange economy to improve the social entrepreneurship to make it a new internal business philosophy.

6 Social Entrepreneurship and Fourth Sector

Social entrepreneurship with the orange economy is based on “creating effective incentives for employees, which allows the company to create conditions both to increase employee productivity and to continue working in the company” (Nikiforova and Shyian 2021). That is, social entrepreneurship needs to implement technology as levers to improve productivity (Parra et al. 2020). Also, it is the role of government and social capital that directly causes a positive and significant impact on business performance (Gandhiadi 2019) to generate employment and productivity. That is, companies direct efforts and resources to the development of innovative solutions to social problems, promoting a positive impact on the community. This is how the State of Colombia configures a policy of social entrepreneurship from a social economy proposal, which is configured from the development plan.

The fourth sector is made up of blended value organizations, chaordic organizations, civic enterprises, common good corporations, community development corporations, community interest companies, community wealth organizations, cooperatives, and cross-sectorial partnerships. As well as faith-based enterprises, hybrid organizations, kyosei, new profit companies, social or sociality economies enterprises, social businesses social enterprises, sustainable enterprises, and tribal corporations to create for-benefit. So, the organizations of the twenty-first century need to be chaordic to adapt to the ongoing challenges and challenges they face. The chaordic model is not efficient for sectors and areas such as industrial factories, large-scale production chains, but its methods and philosophy are desirable, to a greater or lesser degree, for the infinity of companies and entities that compete in the market and must improve and innovate day by day to differentiate and achieve customer satisfaction. However, in the information age, it is disruptive thinking and talent—and not cheap, disciplined labor—that organizations need to meet their needs. Additionally, the growing sector of for-benefit enterprises offers an opportunity to solve many of these challenges while advancing inclusive and sustainable growth. For-benefits are referred to by many different names, such as public benefit corporations, social enterprises, community interest companies, social businesses, hybrid organizations, benefit corporations, cooperatives, and sustainable enterprises, to name a few.

7 Colombia’s National Development Plan and Its Relationship to the Orange Economy

According to the current government’s National Development Plan (Plan Nacional de Desarrollo—PND), it is based exclusively on the fulfillment of seven covenants that especially promote entrepreneurship and the Orange Economy in all its fiscal and social axes:

1. **Pact for legality:** The Development Plan contemplates four lines of action that tend toward legality, one of which articulating this proposal is the “alliance against corruption, through transparency and participation” by developing a curriculum whose protagonist of learning is the human being forming integrally for knowledge and doing, ensuring the joint development of hard and soft skills. Corruption is not an exclusive practice of the public sector, but also of the private sector; all actions that distort or erode the tax base in the determination of taxes, such as evasion, avoidance, and transfer, are corruption. As an IES - higher education institutions, it is a social commitment to fight this practice from the formation processes (Plan Nacional de Desarrollo—PND 2018).
2. **Pact for entrepreneurship, formalization, and productivity:** The allocation of public resources of 2508.2 billion in 2018 will energize the economy; to respond to the proposed expectations, highly trained professionals are needed who, together with the government’s policies and legal norms, will achieve compliance. A simple State that seeks to reduce excessive regulation and red tape will make organizations more competitive and productive (Plan Nacional de Desarrollo—PND 2018).

The processes of business formalization seek to minimize the high rates of evasion and avoidance that directly affect the execution of public expenditure, so maximizing the levels of the collection is a joint task of the tax administration, taxpayers, and tax advisers. In business organizations, the professional tax expert guarantees that the economic interests of the State are determined in the same way as those of the other members of the interest groups. (Plan Nacional de Desarrollo—PND 2018).

By improving levels of productivity and competitiveness, tax collection is enhanced, thus responding to Organization for Economic Cooperation and Development (OECD) expectations regarding the tax burden, ensuring that the tax burden is efficiently and equitably distributed among all (Plan Nacional de Desarrollo—PND 2018).

In the same vein, Law 1450 of 2011, Article 50 creates the program “Productive Colombia” as a transformation program, responsible for promoting productivity, competitiveness, and strengthening sustainable value chains (Plan Nacional de Desarrollo—PND 2018; Ley 1450 de 2011).

The philosophy of the taxes is not only to collect but also to encourage and strengthen the development of some of the weakest economic sectors and does so via tax incentives. Tax savings are possible from the economy of choice when the tax rules identify the actions that it incorporates to minimize the tax burden as:

- (a) Innovative technological development companies
- (b) Investments in research, development, and innovation projects
- (c) Works for taxes
- (d) Scholarships for taxes

- 3. Pact for equity:** For the national government, equity is the backbone of the PND; achieving it is the result of legality + entrepreneurship; an equitable tax system is based on legality and justice, developing a legal business activity means to formalize, undertake, innovate, and improve productivity, while paying fair and equitable taxes, which contributes to the economic capacity and economic sacrifice according to this, is to grow with equity (Plan Nacional de Desarrollo—PND 2018).

Equity is one of the guiding constitutional principles of the tax system; it is equitable when the tax burden is distributed fairly, avoids inequalities, and seeks progressiveness. The high levels of business informality make the system inequitable by putting pressure on formal companies and being time-consuming and in many cases invisible to the informal ones. Fostering policies of formalization and business productivity are the strategy for achieving a tax system that respects the horizontality and verticality of equity (Plan Nacional de Desarrollo—PND 2018).

But equity should not only be analyzed in the context of collection, it goes beyond that, it is the mechanism that promotes equality. An equitable tax system allows for significant variations in the GINI indicator to the extent that it permits a fair redistribution of wealth that is evident in the allocation of public goods and services, reduction of social inequality, and engine of economic growth (Plan Nacional de Desarrollo—PND 2018).

Thus, the PND is a “pact for equity” that seeks to reduce the high levels of distributive inequality, a characteristic of the current social situation in which we live, where a minimum percentage of people concentrate the greatest wealth of the country, subjecting the great number of inhabitants to survive in conditions that are not worthy of human beings. It is there where equitable tax systems are the only solution to combat and reduce the high rates of inequality. So that the “pact for equity” achieves a reduction in poverty, inequality, and progress in equity, the IES in its training processes should guide their students to act in their professional practice in the search for equity and justice (Plan Nacional de Desarrollo—PND 2018).

- 4. Pact for Science, Technology, and Innovation “a system to build the knowledge of the Colombia of the future”:** This pact directly involves the university, business, state, and society to respond to the challenges introduced by the Fourth Industrial Revolution and Colombia’s participation as a member of the OECD (Plan Nacional de Desarrollo—PND 2018).

The incorporation of science, technology, and innovation (CTI) to the tax system allows the efficiency and simplicity of the processes that determine the tax base, taking into account that the technology is “the application of scientific knowledge to daily life and the main objective of this is to make it simpler, longer and more comfortable.” (Rodríguez 2012). The active subject–contributor communication is given in the new digital environments (Plan Nacional de Desarrollo—PND 2018).

As a result of technological research, it will be possible to access automated mechanisms that allow to follow up, control, evaluate, measure, digitalize, and safeguard the actions derived from the formal and substantial tax obligation. Therefore, the CTI will allow determining the tax to be paid or balances in favor, its opportune presentation, and payment, allowing to follow up in real-time the traceability of the processes (Plan Nacional de Desarrollo—PND 2018).

In line with the development plan, Article 2 of Law 1951 of 2019 allows to “establish strategies for the transfer and social appropriation of science, technology, and innovation for the consolidation of a knowledge-based society.” (Ley 1951 de 2019).

5. **Pact for the digital transformation of Colombia Government, companies and households connected to the knowledge era, toward a digital and industrial society 4.0:** “for a more efficient, effective and transparent relationship between markets, citizens and the State” denotes a new way of relating, a new way of communicating, and new tax legislation that responds to the challenges proposed by the new business models derived from the 4.0 Industrial Revolution in digital companies and digital supply networks that today dominate the emerging markets (Plan Nacional de Desarrollo—PND 2018).

Taking into account the above guidelines, the National Planning Department (PND) seeks to: “Promote a State policy for digital transformation and the use of the fourth industrial revolution, through platform interoperability, contact through the single State portal, use of emerging technologies, digital security, training in digital talent, and promotion of the entrepreneurial ecosystem.” (Plan Nacional de Desarrollo—PND 2018).

For the national government, the PND 2018–2022 is fundamental to the “prioritization of emerging technologies from the fourth industrial revolution that facilitates the provision of state services through new models including, but not limited to, intermediary technologies, distributed ledger technology (DLT), massive data analysis, Big data, artificial intelligence (AI), internet of things (IoT), robotics and similar” which results in more effective and efficient mechanisms, and in real-time, that track the traceability of the economic events that give rise to the tax obligation in the formal and substantial manner (Plan Nacional de Desarrollo—PND 2018).

The impact, perception, and incidence of the pact for legality, equity, and entrepreneurship can be measured and evaluated if the technological means offered by the 4.0 revolution are synchronized with all actions aimed at achieving the proposed objectives and goals (Plan Nacional de Desarrollo—PND 2018).

6. **Pact for the protection and promotion of our culture and development of the orange economy, Colombia orange:** development of artistic, creative, and technologically based enterprises for the creation of new industries where the State through the national budget intends to finance their creation and potentization; the exploitation of intellectual property and copyrights becomes an industry that generates economic development (Plan Nacional de Desarrollo—PND 2018).

The development plan in its Article 179 contemplates the creation of orange development areas. These areas will have tax benefits like exemption in a percentage of the property tax, in the tax for the purchase or sale of real estate, and the exemption of the payment of the urban delineation tax works by taxes (Plan Nacional de Desarrollo—PND 2018).

Colombia, through the 1943 financing law of 2018, creates a favorable scenario for value-added, technological, and creative entrepreneurial initiatives to be exempted from income tax in a term of 5 years (Plan Nacional de Desarrollo—PND 2018; Ley 1943 de 2018).

Creating tax incentives attracts investors as actors of development, achieving the proposed economic growth that allows greater visibility of decent employment rates and business formalization (Plan Nacional de Desarrollo—PND 2018).

7. **Pact for effective public management, the transformation of public administration:** The 2018–2022 development plan takes up what is proposed in Law 1450 of 2011. Art. 230, which conceives a “digital government as a policy of management and institutional performance” (Plan Nacional de Desarrollo—PND 2018; Ley 1450 de 2011).

Within the framework of this agreement, the modernization plan of the tax administration is aimed at facilitating the taxpayer’s voluntary compliance with its tax obligations in a friendlier relationship, consistent with the regulatory guidelines and trust, facilitating understanding and compliance: “The National Tax and Customs Administration—Dirección de Impuestos y Aduanas Nacionales (DIAN) will be a modern and more conscious entity in its processes, using state-of-the-art technologies and the Big Data will be an important ally in the fight against corruption” (Departamento Nacional de Planeación—DNP 2018; Plan Nacional de Desarrollo—PND 2018).

The National Tax and Customs Administration—Dirección de Impuestos y Aduanas Nacionales (DIAN) proposes to transform from four axes:

“Human talent, Technology, Proximity to citizens, Legitimacy; the second axis is connected with the pact for digital transformation, which includes electronic invoicing and the modernization of the platform known as Muisca” in the search for a more efficient and simple collection and control system that offers a friendly environment for taxpayers to comply with their tax obligations (Plan Nacional de Desarrollo—PND, 2018; DIAN 2019).

Along with the digital modernization of the National Tax and Customs Administration (DIAN), an additional formalism is introduced in Law 1430 of 2010 known as the “bankruptcy law,” which obliges taxpayers to use the country’s banking system to recognize assets, liabilities, income, costs, and expenses for tax purposes (Plan Nacional de Desarrollo—PND 2018; Ley 1430 de 2010; DIAN 2019).

The Latin American economy is in the process of improving its indicators based on business creation policies. However, from Colombia, the government configured a plan to motivate young people to create businesses focused on the orange economy and to promote social effects. Therefore, the crises contribute to

creating businesses if you have an open and creative vision; that is to say, to take advantage of the problems as opportunities (Plan Nacional de Desarrollo—PND, 2018; DIAN 2019).

8 Methodology

The research is qualitative of a descriptive, nonexperimental, transversal type. Since we want to analyze and determine the different situations, customs, and characteristics that are presented in the daily life of these types of companies, to give a diagnosis about the results that will be collected during the analysis of information and to observe phenomena and situations within their real context for later analysis in a single moment.

The technique was an in-depth panel interview with three managers who created companies during the last decade focused on social entrepreneurship with emphasis on technology (software for the blind—home automation—A1), recovery of corporate plastic waste (housing and games for schools—B1), and foundation support for the recovery of recyclable elements for the development of technological products with social impact (mouse from recycled plastic for the blind—C1). The interviews are coded with letters and numbers to preserve the anonymity of the interviewees. Informed consent was signed (habeas data).

The first contact was the company created during 2018 and put into operation in 2019 focused on using technology (artificial intelligence and data mining) to support low-income people to improve their quality of life-based on automatization houses. The second contact was The Bottles of Love Foundation, created in 2016 in Colombia to offer an integral solution to the sustainable management of flexible plastic waste and improve the quality of life of vulnerable communities in Colombia and Latin America. Through a participatory strategy with institutions, companies, and communities, the Foundation promotes the filling of bottles with flexible packaging waste generated in schools and homes, to transform them into plastic wood used to build playgrounds, urban furniture, and housing for the benefit of vulnerable populations. The third businessman contact was an entrepreneur who creates his/her business gathering collecting computer waste and converting it into items for blind people from the same system and hardware, as is the case with creating mice for the blind.

They contacted each other by phone, made appointments the same day, it was an open conversation with a panel of experts without video- or voice recording, and written data were taken. With four guiding questions: (1) Approaches that understand by social entrepreneurship (2) What were the problems and crises when starting the company with a social focus? (3) How the idea of creating the company with a social and economic focus was born? (4) What were the effects of the creation of the social orange economy? These configure two categories to analyze the research: (1) Social focus, problems, mistakes, and solutions, and (2) effects, improvement, and impact. Next, we interpret the definitions of social

entrepreneurship, fourth sector and its relationship with the orange economy; and the second category was configured from interpreting the effects that were involved in creating companies with a social focus from the social economy.

9 Results

Concerning the first category of research analysis: social focus, problems, errors, and solutions, it is detected that the managers are afraid to carry out the venture but are motivated by the passion for the development of the idea to be shared with the community.

9.1 First Category

Imagination is an opportunity to create real dreams, as Manager A1 says: *“at the beginning, one has many ideas and will become rich in a short time but time has shown that this becomes an imaginary.”* In other words, the imagination contributes to improving the implementation of the idea if it has the support of the community it influences. Additionally, Manager C1 said, *“20 years ago I began to work with waste and I began to look for a way to turn that waste into something that would transform the lives of the recycler and in the development of the project, I began to detect that plastic was a very important element, because it can be transformed, it can be turned into something else, . . . but it is also associated with a big problem on the planet, due to its misuse . . . ends up in water sources, ends up in landfills, ends up being incinerated, we started attacking to turn it into raw material, to be used for construction in a plastic way, but immediately I connected with the possibility that that plastic wood became the home of a person.”* Starting projects is not easy and if they are focused on the social reality they are even more difficult, but the creativity to create companies is leveraged in multiplying the ability to undertake a dream that becomes a reality and impacts the environment, social and economic.

However, helping people and taking care of the environment are opportunities that are not analyzed from an economic approach, but from helping to live better in the future. As Manager A1 says *“although one wants to help others, they always look at you as a poor innovator, for having a social solution, although you talk like many people, they listen, but the only thing they ask is how much is the profit at the end of the investment. . . but one is still struggling to get customers . . .”* In short, what is sacrificed economically is reinvested in social emotion. But at the same time Manager C1 exposed *“So the project arises 10 years ago, at a time in his life when he was tired of doing what he did, he was working with e-commerce, importing goods from China and the United States and marketing them, but there was a gap where nothing filled it, no business did. It was the social work that ignited the spark to feel useful, to know the people and their needs, to know the real country; at that*

moment I think about how the electronic elements could serve someone and I asked myself who could need them, and I see in the population with a disability an audience with difficulties that requires access to them, that's how Digital Accessibility for All was born." The imagination and the realization of the activities that people like tend to improve the enterprise because they are supported by their motivation, which contributes to following a dream even if they have problems. Thus, the entrepreneurship of the orange economy is based on two unstudied factors: passion and motivational imagination.

At the same time, Manager A1 stated that *"the household is mismatched because there is no financial income, yet opportunities are offered for contacting other support systems. The opportunity was given to increase the portfolio, create alliances and get professionals with different knowledge, not only system engineers as I am, a position required advice, financial, accounting, economic, managerial, marketing, among others. . ."* Therefore, the reality is based on seeing what others do not see as opportunities. However, Manager A1 showed that *"the best way to continue with the venture is the passion for what it is done, not doubting the idea. . . is to follow and insist . . ."* that is, there is an entrepreneurial passion for having *"imagination, . . . talent surpasses economy"* (Manager A1). But Manager B1 stated that:

It has not been easy and we have had to resort to financial support, even more so because there is still a fear in this type of project that works with waste and in which the recyclers themselves do not see the great potential that their collection has. There is no technology, there are no strange things, we just want people to put these plastic packages inside a bottle and these are very interesting figures. In Colombia we produce 1500 tons of plastic bags and packages daily, what we are looking for is to recover at least 30% of these plastics through each housewife. The company's staff, fill the bottles with this waste, we are responsible for our plastic and this is the raw material to make a priority interest housing in Colombia, with this we can achieve that a person can live with dignity, is a matter of collaboration, contribution, responsibility of all citizens in Colombia.

The history of the creation of the companies by the interviewees provides the criterion to create, which is based on identifying problems that become opportunities. In other words, the orange economy contributes to taking advantage of creativity to promote social solutions. Manager A1 exposed *"we are talking about wealth, not economy, it is the opportunity to enjoy entrepreneurship and creativity. . . the value is based on intellectual property that is why we offer technological services for people with disabilities so that they can live as if they saw. . ."* At the same time, Manager B1 sustains his enterprise by saying that *"for 10 years has been creating low-cost home-made aids for people with disabilities, which promotes inclusion, thus overcoming the barriers of the high cost of commercial solutions. It also eliminates the barriers of ignorance because through tutorials and training they teach how to make them with elements that are easily accessible in the local environment."* Therefore, creativity is an essential element of the orange economy when the barriers of society are observed as an element that reduces economic estimation and leverages more social interest.

In other words, the happiness of a young person to receive a plastic arm that leads to writing again cannot be described from the economic but from the intrinsic

emotion. Manager C1 explained, “*We have been studying the issue of waste and the issue of packaging responsibility for 17 years, when we told the*” XXX “*companies about the project on the process of recovery and they wanted, to participate in the Foundation’s project because they realized that, we are an alternative in the closing of the cycle and they linked up with the Foundation to give us the waste I produce within the company so that you can accelerate this process of dissemination, construction with all communities. This has helped us to make donations that fill us with pride, because we can deliver more priority interest housing that improves the quality of life of Colombians. The technology we developed would allow us to make the dream we had come true.*” In other words, the social ideas from the entrepreneurship from the orange economy are supported by the will of companies that want to reduce the environmental impact of their production. That is, there is an external economic factor of production that leads to seeking solutions but with a dual purpose: to care for the environment and reduce the cost of reverse logistics.

But from another point of view, the orange economy has creative impulses that the entrepreneurs detect at the moment of creating the companies and they define it in the following way: Manager A1 expressed “*social innovation or orange economy are emotions to be more creative with professions that are becoming obsolete, since it focuses on achieving improved creativity in arts, culture, archeology and systems problems ... is to be inserted in a social economy, with people and for people, is to express the wealth of the human and not the financial. . .*” but Manager B1 stated that “*the social innovation or orange economy occurs in the creation of these houses that impact the quality of life of Colombians. In which we developed a proposal in which the houses are built as a Lego. They are cards that are joined in an easy way and it is rewarding to see the joy of those who benefit from this project and much more valuable than the money; that comes to us because it is a Foundation that works for the people*”. However, Manager A1 argued that “*the orange economy is the strategy of generating wealth through human creativity, in the field of art, culture, technological sciences. It is the opportunity to reborn social ideas that contribute to improving life that in the long term, 10 to 20 years, will have a financial return. . .*” All the above expresses the fact that social entrepreneurship from the orange economy policy is based on the generation of human and not economic satisfaction.

The social focus category lets us understand why people need to think differently. The problems that appear while you are creating new social enterprises can configure a new opportunity; otherwise, the errors can change the thought-form of the real business that you want to create. Additionally, the solutions to different problems are based on thinking in another way as 360 degrees (see Table 1).

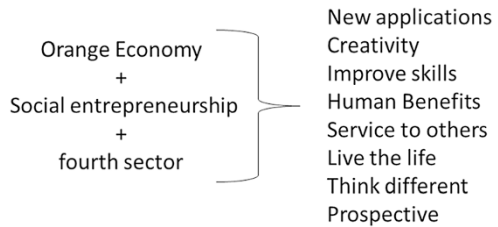
However, the various definitions of the orange economy linked to social entrepreneurship are defined as follows: Manager A1 stated “*innovation of the set of creating new applications of diverse software that leverage the way of learning of those who have difficulties... is to contribute to improve the social environment and to be able to impact in the life of them to achieve a better quality of life*”. But at the same time, entrepreneurship leverages the combination of technology with skills to develop the social proposal of impact on the products or services to be developed. As Manager B1 said, “*the orange economy is another way in which projects that impact*

Table 1 Categories' analysis

Category	Concept of the category
Social focus	Help others to improve the quality of life and establish a passion for social activity. Focus on the operational data store (ODS) Training for development in the fourth sector from technology-based intellectual development Consultancy on issues of orange economy, equity pact, innovation, entrepreneurship, and control of corruption Pacts of the orange economy to provide a social, educational, research, and intellectual environment
Problems	Aspects of absurd ideas without credibility for not generating economic income, procurement of raw materials (plastics), procurement of working capital, a conviction of employees and the business sector, and business approach to the orange economy
Errors	Dispersed joint knowledge, the complexity of the factors of starting the business based on the idea alone, and lack of marketing vision for innovative products. Lack of acquisition of specialized machinery and development of innovative products that are not associated with the fourth sector of the common people
Solutions	Strategic alliances, advertising with entities that support social entrepreneurs and innovators Creation of their machines to forge the product to be sold Dialogs on social entrepreneurship in the orange economy from the fourth sector

Source: author elaboration

Fig. 1 Implications to think as social entrepreneurship.
Source: author elaboration



society can be taken into account, in which creativity, skills, and technology contribute to the quality of life of a Colombian and that in a few more years' economic growths can be observed". Today's society is concerned with improving the quality of life based on caring for the environment by recycling products to create other products from waste.

In other words, the orange economy plus social entrepreneurship and including the fourth sector lets the business achieve to think differently and find new implications (see Fig. 1).

In summary, the orange economy leverages entrepreneurship from the fourth sector by the following conditions: opening a more social orientation through the approach of corporate social responsibility, social strategies, cooperation, and cooperation is the creation of synergies between entities that will converge in goals and practices, cross-cutting holistic thinking focused on social and environmental

aspects. Social and environmental performance is constantly improved throughout the stakeholder network. Employees and other stakeholders are compensated in proportion to their contributions. The fourth sector will become more formalized and distinguished in law, complementing existing sectors while enabling for-benefits to drive sustainability and equity alongside profit.

9.2 Second Category

However, from the second category: effects, improvements, and impact of the orange economy in entrepreneurship contribute to the development of opportunities from the problems to be creative. Manager A1 exposed that *“the orange economy is synonymous with innovation and creativity, in the form of a color identity of thinking differently in art ... is the same form of learning to undertake, is an opportunity to create a dream of being happy to impact the culture, thanks to software engineering ... that support the investment of artificial intelligence development. . . is a talent that you have, we just don't know that we have it.”* Additionally, Manager B1 stated that *“the orange economy allows us from the Foundation to fill a bottle of Love by contributing with a social enterprise, this is how the opportunity arises to resume the strategy of the Eco-block but with a different objective: To close the cycle of flexible plastic waste by transforming it into RPL (Recycled plastic Lumber).”* Social entrepreneurship from the orange economy aims to improve the quality of life by caring for the environment as established by the ODS. Also, the quality of life is configured in the opportunity to help others as expressed by Manager C1 *“The aim is that people with disabilities do not depend on expensive equipment for their mobility, which in many cases they cannot afford. For this reason, the Foundation Todos Podemos Ayudar (We Can All Help) was created, dedicated to finding solutions of all kinds for people who require it and who cannot access prostheses or technological devices that solve their needs, says ‘we work to improve your quality of life.’”* In summary, social enterprises with an emphasis on the orange economy are distinguished from other enterprises by their social touch and support for those in need of human and nonfinancial assistance.

Companies improve their mood, not from a financial point of view, but from a human, social, and cultural point of view. Therefore, they help others to learn to live better. This is how Manager A1 explained that *“feels joy in helping others, but also feels the fact that you have no financial income, but the inner excitement is priceless . . .”* Likewise, Manager B1 expressed that *“I feel very excited to improve the quality of life of Colombians who do not have the opportunity to get decent housing.”* The social entrepreneur with a focus on the orange economy impacts business creation by having passion, happiness, emotion for what one does, without receiving money immediately. Figure 2 shows the effects, improvement, and impacts the new entrepreneurs can achieve their goals.

However, from the second category: effects, improvements, and impact of the orange economy on entrepreneurship, it is highlighted that the entrepreneur detects

Fig. 2 Effects, improvements, and impact of the orange economy in the fourth sector. Source: author elaboration



opportunities in the market that others miss. Manager A1 said *“There are solutions, but people believe that everything is already done, but the false one, is to improve the existing ...”* According to Fadeev (2021), the orange economy contributes by having legislation that is coherent with the events in the environment; that is, seeing opportunities that the State tries to create so that others can take advantage of the creation of companies.

10 Discussion

However, from the category of social approach, problems, mistakes, and solutions, he is confronted with thinking differently. It is the opportunity to learn to see problems with analogous solutions that leverage the reality of learning to be creative. Manager A1 suggested that *“passion is the source to create and by creating it becomes innovative if it intends to change society for the better, it is the contribution to help society ...”* In other words, creativity is the source of the orange economy (Gaviria Roa et al. 2019) by combining talent and cultural aspects to help others. In other words, *“being creative is not enough, one must keep the passion to face the unbelievers”* (Manager A1), therefore, creativity is part of changing to build a united social culture (Montaguht et al. 2017).

The orange economy is the future and is based on three aspects: creativity, sustainability, and economic capacity when grouped. That is, the way to automate knowledge is not only to think, but it is also to combine knowledge to be creative. Therefore, Manager A1 said, *“creativity supports to think differently but studying the social beings, is to include all to promote the knowledge jointly.”* In other words, entrepreneurship is based on studying the culture (Gaviria Roa et al. 2019). Likewise, the social solutions from the orange economy are available when discovering

new national and international markets that help to improve the quality of life, as exposed by Manager A1 *“exporting creative knowledge is the best way to achieve the combination of knowledge to give solutions to simple problems but society itself is in charge of complicating it.”* In other words, crises are opportunities by motivating employees to provide solutions that management did not see before (Nikiforova and Shyian 2021). But this idea is based on what Manager C1 said, *“The self-sustainable model they have is characterized by offering training and workshops for trainers so that teachers, parents, community leaders learn to make and develop technological aids for people with disabilities that are made with everyday elements and low cost, thus leaving installed capacity in the communities.”* He explains, *“For this reason, our aids are free, because we don’t sell them, we teach them how to make them. The training is financed by individuals, foundations, private companies, and public entities. Only in very specific cases do we deliver the training.”* The venture is configured in the opportunity to achieve greater social satisfaction to link passion for what is done.

The first effect of the orange economy on social entrepreneurship: Passion. This passion is based on what Manager C1 said: *“I am a social entrepreneur, passionate about technology, willing to do my bit to change the world, they call me the MacGyver paisa, I like to find solutions to real problems at low cost”*. At the same time, the passion is based on *“entrepreneurship is born from within people, therefore, it is not only money, and it is a wealth of . . . ahh intellectual capacity to design devices to help others . . .”* (Manager A1). In other words, passion is one of the factors that drive the creation of social enterprises with the support of the orange economy. In turn, social entrepreneurship seeks to generate changes in other people’s lives, that is, discovering that life has different facets but you can help others to see life with optimism.

The second effect is optimism. An optimism that facilitates the reality of those created with love and desire, as stated by Manager B1 *“The venture was born from the desire to change people’s lives to improve and achieve through an idea that for many, did not consider that plastic waste could impact the life of a person”*. That is, the entrepreneur configures his human and environmental desire to create new opportunities that contribute to the improvement of the quality of life. This new organizational architecture (in terms of objectives, structure, processes, and organizational culture) makes them especially suitable to offer creative and innovative solutions for social problems.

The third effect is based on the will to overcome social problems. A social problem that is solved with positive energy. In other words, the businessman is supported in impacting social improvements in the face of adversity. This is how Manager A1 explained that *“one must think differently to overcome social problems and better impact society, it is to give social welfare as a whole, not just in isolation... therefore one must break paradigms of constantly challenging one’s intellect, to break new frontiers of knowledge. . .”* At the same time, Manager B1 explained that *“we must think about improving the lives of others through our proposals we can impact the lives of less advantaged people, who do not have the opportunity to have decent housing, I am very happy that our proposal has gone far*

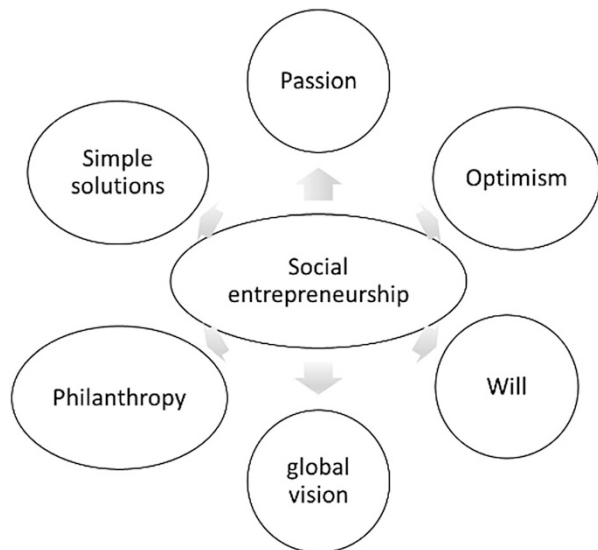
and that in several countries want to replicate our proposal, so it has no limits and if many dreams to achieve”.

However, a fourth effect appears: creating new and simple solutions. As explained by Manager C1 “we wanted to unite our work and the work of the foundation to create something incredible, as a result, we have this application, in which all users with disabilities will be able to access the entire universe of creations of (name of partner) in one place.” Entrepreneurial companies analyze the market to find sources of simple solutions that strongly impact the environment. Therefore, social innovation often requires the values of generosity and solidarity on enterprises to donate work and to provide a service to society in general.

The fifth effect of the orange economy on social entrepreneurship is based on being creative with knowledge of your philanthropy. That is to say, “I want to grow as a person and understand the country in which he lives where the difficulties of the people are many, professionally, he wants to provide himself” (Manager C1). Likewise, Manager A1 expressed that “to undertake is to be creative which has the potential to economically transform the regions and then the country, but one should not only wait for the State’s intention, it is done from oneself . . . many problems arise but, I insist, it is a passion that drives us to be creative . . .”. In other words, the entrepreneur must know himself and understand the cultural environment to learn from the needs that people require. In social innovation, improvements in organizational design, products, or processes have to be available for all and any parties interested in their use or application (see Fig. 3).

The sixth factor focuses on defining opportunities for mutual benefit. As expressed by Manager C1: “an entrepreneur is a person who identifies opportunities and with his or her creativity can transform people’s lives, improving the economy of the regions and the country, providing innovative solutions with exponential

Fig. 3 Characteristics of social entrepreneurship in the fourth sector.
Source: author elaboration



growth.” Likewise, Manager B1 expressed *“It is to mount company but the benefit of the people is over the economic thing, logically there is an interest of auto sustainability and growth but first there are the people”*. That is, looking for a real need, exposes one *“to contribute to something that people require, and join passion, talent or taste to help, that is a formula that does not fail as entrepreneurs.”* Therefore, the entrepreneur must analyze the opportunities that arise when nobody sees them and turns them into reality, so that they help to be a better society. Given the growing challenges facing the world due to the aging of the population and environmental degradation, social innovation is needed to obtain solutions that are, above all, sustainable and long-lasting.

However, it is not only the entrepreneur who relies on having passion, optimism, willingness, creating simple solutions, and identifying the philanthropy of society, but to have a global vision. Manager A1 explained that *“is to see spaces where others do not see it that generates creativity, to think differently and thus overcome the obstacles that society itself invents out of envy since they only focus on the financial and not on the social.”* Therefore, one way to create solutions is to have a global and international vision of domestic and also globalized problems (Sekhar 2010). In addition, Manager C1 said *“The orange economy in the sum of talents in which creativity plays the primary role for the development of business models that improve the quality of life of people and contribute to the growth of the country.”*

Therefore, the effects of the orange economy on social entrepreneurship are based on having an open mind, understanding everything around them, not rejecting opinions but taking advantage of them, and not being afraid of change, trying without seeing the failures as obstacles and learning from others. The capacity to innovate must be applied to projects that ensure the future of humanity and that guarantee appropriate conditions for equal progress in society as a whole.

11 Conclusions

In conclusion, the orange economy contributes to social entrepreneurship by assuming creativity as a social axis. That is, the social entrepreneur focuses on having a passion for what he does. Additionally, the technology leverages the realization of social projects by identifying the real needs they want to cover. Likewise, the social entrepreneur is ingenious, has a vision of the social and not economic business, has a real purpose for helping others, and is concerned about involving teams with a social and ecological vision. By undertaking with an orange economy vision, one risks failure because of having a relationship with the social ones, but in the long term, money is reinvested that is based on emotion. Also, the orange economy leverages creativity from the very problems it faces. In other words, the effects of the orange economy on the entrepreneur are achieved by having passion, optimism, willingness, creating simple solutions of high impact, understanding the local environment with a global vision at the same time, and identifying opportunities where there are none.

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