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Sustainability in vertical residential condominiums: a study in the metropolitan region of Campinas

Sustentabilidade em condomínios residenciais verticais: um estudo na região metropolitana de Campinas

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Resumo

Diante do acúmulo de evidentes problemas ambientais, sociais e econômicos, transferem-se aos países, organizações em geral e à própria sociedade o imperativo de reavaliarem suas atividades, a fim de garantir sua sustentabilidade atual e das gerações futuras. Refletindo acerca dessa questão, este imperativo também se aplica aos condomínios residenciais, um modelo em menor escala da vida em sociedade, e, em muitos aspectos, similar à dinâmica das pequenas ou médias empresas, com impactos significativos ao meio ambiente e em relação à vida das pessoas. Partindo-se dessa premissa, o objetivo do estudo foi avaliar se existe a adoção de práticas sustentáveis por parte de condomínios residenciais verticais localizados na Região Metropolitana de Campinas. Trata-se de pesquisa aplicada, exploratória, com técnicas qualitativa e quantitativa para análise dos dados. Como resultado da análise, apresentam-se as principais práticas sustentáveis encontradas e, dessa forma, contribuindo para a ampliação do debate do tema.
Palavras-chave: Sustentabilidade. Condomínios Residenciais Verticais. Práticas Sustentáveis.

Abstract

Faced with the accumulation of evident environmental, social, and economic problems, countries, organizations in general, and society itself are given the imperative to reassess their activities to guarantee their current sustainability and future generations. Reflecting on this issue, this imperative also applies to residential condominiums, a smaller-scale model of life in society. And, in many ways, like on the dynamics of small or medium-sized companies, with significant impacts on the environment and people's life. Based on this premise, the study's objective was to assess whether there is the adoption of sustainable practices by vertical residential condominiums in the Metropolitan Region of Campinas. It is applied exploratory research with qualitative and quantitative techniques for data analysis. As a result of the analysis, the leading sustainable practices found are presented, thus, contributing to the expansion of the debate on the subject.
Keywords: Sustainability. Vertical Residential Condominiums. Sustainable Practices.

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1 Introduction

The continuous intervention of man in nature in search of the necessary resources for his survival and maintenance improved over time through increasingly complex mechanisms of technical evolution and organizational formats. However, it was only with the coming of the so-called industrial Revolution in the 18th century that this intervention gained even more strength, often occurring in a disorderly and confusing way, since it came from a model of life and human activity with great ecosystem impact, negatively interfering in the environmental sustainability of the planet.

Monteiro (2011, p. 26) reminds us that "the environmental degradation is not an accidental consequence of the economic development model, it is a central feature of the way production and consumption are organized in our post-industrial society". Therefore, given the evident environmental problems brought about by this economic and social development model, at the end of the 1960s representatives of countries, non-governmental organizations, companies, and organized sectors of society began to mobilize to try to change this reality and guarantee the survival of future generations.

In this perspective, in 1983, the concept of sustainability that has become one of the most accepted and disseminated nowadays, published in the Brundtland Report, is defined as "a development that meets the needs of the present without compromising the ability of future generations to meet their own needs"(WCED, 1988, p. 46). Thus, this concept, as it was originally proposed, covers not only the environmental issue but also the economic and social issues, that is, the three main dimensions of sustainability.

For Nascimento (2012), environmental sustainability implies a production and consumption model that respect the environmental boundaries, which means producing and consuming in a way that ecosystems can maintain and repair itself. Economic sustainability, on the other hand, assumes more efficient production processes, with an emphasis on the use of renewable energies and the continuous implementation of new technologies, paying attention to the consumption of scarce natural resources. Finally, Nascimento (2012) states that social sustainability assumes that all human beings must have access to a dignified life and that, therefore, it is important to fight poverty, to define an acceptable level of inequality, and to limit the access to material goods, which corresponds to the so-called social justice.

Given the components in its definition, it is understood that sustainability is a complex concept and, above all, a global challenge. Faced with evident environmental, social, and economic problems found on the planet, organizations, in general, need to be more sustainable, mainly within the three dimensions of sustainability, to guarantee the survival of the current and future generations.

The research presented in this paper suggests that sustainability should also be a concern of vertical residential condominiums since they are a type of organization of the social space that prevails in Brazilian cities, especially those of medium and large size. This assertion is based on Bacelo's statement (2012), when he warns that the large number of urban buildings can negatively impact the environment and even people's health and quality of life, as they are social organizations that can generate huge amounts of waste that, if not treated correctly, can have a strong impact on pollution.

To contribute to the debate on this topic in the context of sustainable urban development, and due to the range of cases that could be investigated, the work aims to verify and characterize, under the environmental, economic, and social dimensions of sustainability, the occurrence of sustainable practices in vertical residential condominiums within the boundaries of the Metropolitan Region of Campinas (MRC).

2 Theoretical Foundation

2.1 Sustainability, concepts, and definitions

Historically, the term sustainability started appearing, especially in the 1960s, with a movement of growing concern with the environmental problems faced at that time by the society, mainly caused by human activities realized without considering the limits imposed by natural resources.

The discussions have become deeper and, in 1983, driven by significant environmental disasters, the United Nations (UN) created the World Commission on Environment and Development (WCED). The commission, led by former Norwegian Prime Minister Gro Harlen Brundtland, publishes the Brundtland Report in 1987, entitled "Our Common Future", presenting the main concept of sustainability, which is the intergenerational commitment and solidarity (WCED, 1988).

Sachs (2008) writes that sustainability implies solidarity among the current and future generations through solutions not based on the usual economic concepts, which obviously rule most human relationships, but with economically viable solutions that do not harm the environment nor the social dimension of sustainable development.

Within the context of organizations, Hart (1995) presents this search for environmental sustainability as beneficial because the prevention of pollution, the more efficient management of products, and the use of cleaner technologies, mainly in the production processes, can be transformed into competitive advantages, in addition to potentially reduce costs.

Melo and Martins (2008) contribute by writing that to develop a more sustainable economic system there must be the promotion of better working conditions, the possibility of income distribution, and a more efficient allocation of natural resources. That is sustainable growth with economic stability. In addition to other actions that, according to Ferrer and Cruz (2017) are based on the idea of wealth redistribution to provide better quality of life for people.

Finally, Ashley (2005) argues that some issues that can be considered by managers, aiming to strengthen social responsibility within organizations, are the search for promoting education at all levels; organizational transparency thus building the so-called relationships of trust; rules of conduct and ethics clearly defined, objective and accessible to everybody; partnerships; in addition to taking business decisions that respect the economic, social, and also environmental issues.

According to the authors mentioned here, sustainability is a broad concept with multiple aspects, mostly involving three main dimensions: environment, economy, and social. Generally, it also brings the idea of a set of actions, strategies, and human attitudes that aim to reach a model of sustainable global development that does not put the environment at risk, while it guarantees a dignified living condition through economic activities on a different basis from the current standards. This condition can be observed at any level of complexity that may reach human social organizations. As sustainability should be a concern both for large and small organizations, public or private, this study focuses on a special group: the residential condominiums.

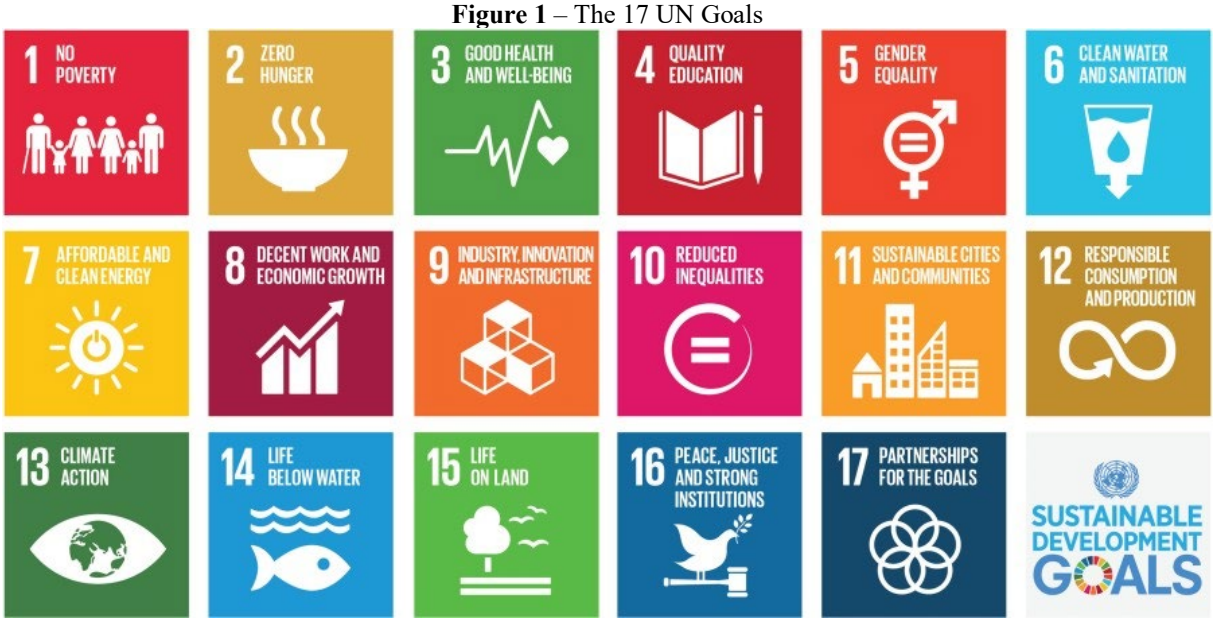
2.2 The 17 goals of the UN's 2030 Agenda

Faced with the limits of natural resources, environmental impacts of human activity, and the growing inequalities among different social groups, seeking to make the world a better place for everyone, in September 2015, there was a meeting at the United Nations in New York during the General Assembly, more than 150 heads of state and the highest representatives of the member countries of the United Nations to discuss the future of the planet. According to the

final report of the meeting, 17 Sustainable Development Goals (SDG), and 169 targets, were set, which are intended efforts at the global level, making the intergovernmental agenda through 2030 to promote global sustainable development (UN, 2015).

Figure 1 presents the 17 Goals of the UN's 2030 Agenda. These goals, in a way, also encompass the three main dimensions of sustainability, with the proposal of being "an action plan for people, for the planet, and prosperity" (UN, 2015, p. 1).

Figure 1 – The 17 UN Goals



Source: UN (2015)

It is in this perspective that the 17 Goals of the UN 2030 Agenda were used in this research as a basis for the assessment of residential condominiums activities by their managers (president of the association). That is, to build an instrument that allows verifying if their actions are, in some way, aligned with a greater commitment, in this case global, of contributing to sustainability at its several levels.

2.3 Micro and small companies and vertical residential condominiums

In several countries, companies are classified by their size, usually attributing names ranging from micro, small, medium, and even large. The same happens in Brazil, where the term Micro and Small Enterprise (MSE) designates companies that fall into the range of small-size companies. Institutions such as the National Bank for Economic and Social Development (BNDES), and the Brazilian Support Service for Micro and Small Companies (SEBRAE) are references for classifying MSEs, using criteria based on maximum level of revenues and number of employees to define a company as MSE.

According to BNDES (2015), a micro company has an annual revenue of up to BRL 2.4 million, and a small company has a revenue of more than BRL 2.4 million and up to BRL 16 million. For SEBRAE (2018), a micro company is a simple business company, registered in competent bodies with annual revenue equal to or less than BRL 360,000.00. However, if it exceeds BRL 360,000.00 and is equal to or less than BRL 4,800,000.00, the company will be considered a small business (SEBRAE, 2018).

SEBRAE (2017) also informs that there is a differentiation concerning the number of employees for companies in the trade and service segment, and for industry. In the trade and

service segment, the micro company can have up to nine employees, and the small company from 10 to 49 employees. But in the industrial segment, the micro company can have up to 19 employees and the small company from 20 to 99 employees.

Even because of the difficulties they face in their daily lives, MSEs need to act to be more sustainable. It is not only a convenience or necessity for survival but a duty, as already seen, regardless of the organization size and nature. It is their contribution to the survival of the planet, the society and the business itself.

SEBRAE (2015) listed nine sustainable practices that can be adopted by MSE. They are as follows:

1. Carry out responsible financial management;
2. Seek maximum quality in all activities, whether in products, services, or the service provided;
3. Make sustainable purchases to know the origin of the acquired materials;
4. Monitor the correct disposal of solid waste generated in their activities;
5. Seek to build partnership with other organizations;
6. Develop social actions that contribute to the community around them;
7. Have an environmental management, that is, demonstrate an interest in preserving the environment, by avoiding pollution, showing concern with the use of natural resources, such as water, and the use of energy, wherever possible to opt for renewable energies, among other actions, as well as knowing and complying with current environmental laws and rules;
8. Promote the development of employees through a fair and pleasant workplace, following the labor laws;
9. Maintain good communication with all stakeholders honestly and efficiently.

The sustainable practices recommended by SEBRAE for MSEs could also be adopted by vertical residential condominiums, as their structure resembles those of an MSE since they have revenue from the collection of condominium fees and operate with employees for daily activities, such as cleaning, security, and concierge services .

More specifically, the residential condominium is a type of housing in which many families live within the same enterprise, but they are spatially separated by autonomous units. According to Rizzardo (2020), the Brazilian law defines condominiums as those where two or more people own a fraction or part of an asset, individually separated, but which together form a unit, in this case, the condominium. The condominium can also present a vertical construction, being then known either as a condominium of apartments or buildings, or horizontal, also known as a condominium of houses or gated community.

In the context of this study, the research was carried out in residential condominiums, which were analyzed as an example of small organization (MSE), with the input of materials, generation, and output of waste, which also carries out financial transactions, hires services and labor, interacts with people, thus influencing their quality of life, among other aspects.

Meireles (2003, p. 46) describes the organization as “an artifact that can be approached as an articulated set of people, methods, and material resources, a project for a specific outcome and guided by a set of determining imperatives (beliefs, values, cultures, etc.)”. Maximiano (2011) also presents the organization as a combination of individual efforts, which may translate into different types of action, with the aim to reach a common purpose.

In organizational terms, the same happens with residential condominiums. Through their representatives (manager, board, among others), employees, service providers, and residents together seek a common goal, which is the full functioning of the condominiums for coexistence and harmonious relationships among those who live or work in them.

At the same time, it is important to assess the sustainability of condominiums, as they are now present in many Brazilian cities mainly those considered medium or large, which receive numerous projects of this type due to the process of urbanization, especially in recent decades.

Pinto and Mondelli (2017) points that the increasing urbanization throughout Brazil has made life in vertical condominiums a trend that can be seen in large urban centers, such as the Metropolitan Region of Campinas (MRC). This is one of the most important regions of the State of São Paulo and its positive socioeconomic aspects have contributed to the emergence of many residential condominiums, making it an extremely relevant region for the implementation of the survey. According to the Housing Union (SECOVI, 2012) from June 2009 to June 2012, only in the city of Campinas, more than 11,800 housing units in residential condominiums were launched, more than 96% in vertical residential condominiums.

To assess whether the residential condominium of the MRC adopts sustainable practices, it is necessary to measure in some way whether the results obtained in the assessment are satisfying or not. In this context, within the management process, indicators are important and serve as signs or indications that help in the assessment of a given phenomenon (MUELLER, 1997), or even as an indication of future trends, thus contributing to the process of decision-making (SOLIGO, 2012).

In Brazil, institutions such as the Brazilian Institute of Geography and Statistics (IBGE) provide important data that may help in the development of sustainability indicators, especially nationwide,, Other organizations work with regional data, as it is the case of the Metropolitan Agency of Campinas (AGEMCAMP), which provides information on the MRC.

Table 1 shows data from AGEMCAMP and IBGE that involve sustainability indicators and that help in the assessment of the results obtained in the survey of sustainable practices in residential condominiums in the Metropolitan Region of Campinas.

Table 1 – Sustainability Indicators

ITEM	AGEMCAMP - MRC	IBGE – BRAZIL
Water	98.04% of the households were serviced with water supply in 2010.	93.5% of urban households and 35.0% of rural households were serviced with water supply in 2015.
Electricity		99.6% of the households were connected to electricity in 2015.
Solid Waste	99.75% of the households were serviced with garbage collection in 2010.	98.88% of urban households and 33.9% of rural households were serviced with garbage collection in 2015.
Selective Collect		19.5% of the households were serviced with selective collection in 2010, but in 2018, 41% of the households had this service, however, only 10% of the potentially recyclable were collected that year.
Sewage	86.99% of the households were serviced with sewage collection and treatment in 2010.	71.8% of the households were serviced with sewage collection and treatment in 2015.
Renewable Energies		41.2% of the total distribution of energy was considered renewable in 2015.
Poverty	13.78% of private households lived with a per capita income of half the minimum wage per month in 2010.	17.8% of private households lived with per capita income up to half the minimum wage per month in 2015.
Health	8.70% was the child mortality rate (per thousand live births) in 2017.	13.3% was the child mortality rate (per thousand live births) in 2016.
Education	96.25% of people aged 15 and over years or over were literate in 2010.	92% of people aged 15 and over were literate in 2016.

Gender Equality		57.8% of women aged 16 and over were in formal labor in 2015.
Disabled People		17.2% of the Brazilian population or 32.8 million people have any type of functional limitation according to data from the last Census 2010.

Source: The authors.

3 Method

Concerning the methodological approach, the research was characterized as exploratory, since it aims to improve ideas (GIL, 2017) and allows "(...) to examine a topic or research problem that has been little studied or that has not been studied or addressed before" (SAMPIERI, COLLADO, LUCIO, 2010, p. 59). In an initial survey on the topic chosen for the research, searches were made in the databases of scientific papers, Scielo, BDTD, Spell, and Redalyc. As a result it was observed that the topic "sustainability in residential condominiums", within its three dimensions, the environmental, the economic and the social ones, appeared in a small number of publications and, when available, the publications did not refer to the Metropolitan Region of Campinas (MRC).

Qualitative and quantitative techniques were used for data collection and analysis. Data collection was carried out through a self-managed semi-structured questionnaire sent to the managers of residential condominiums previously selected in the form of an intentional sample, based on the contact network of one of the authors, a professional condominium manager (VIEIRA, 2009). Data analysis was performed based on statistical techniques of frequency and distribution of the results presented in the questionnaires and interpreted according to their greater or lesser approximation to the indicators of sustainable practices.

Regarding the geographic selection, the decision for the Metropolitan Region of Campinas (MRC) is based on its characteristics of urban development and growth, which encourage the emergence of vertical residential condominiums. In addition, the region stands out for its initiatives to promote sustainable development – a topic of interest for this research –, such as, for example, the document entitled "Letter from Indaiatuba" (AGEMCAMP, 2010), referred to as a decalogue of goals and commitments agreed by the MRC in October 2007.

To assess whether the vertical residential condominiums in the MRC are concerned with sustainable practices, the questionnaire included questions about actions identified in the literature, described in the section of theoretical foundation, and actions related to the Sustainable Development Goals of the 2030 Agenda (see Chart 1).

Chart 1 – Sustainable Practices

SUSTAINABLE PRACTICES	QUOTE	2030 AGENDA
Conscious water consumption	SEBRAE (2015)	ODS 6
Conscious energy consumption	SEBRAE (2015)	ODS 7
Correct solid waste disposal	SEBRAE (2015	ODS 11
Having an environmental management	Hart (1995) SEBRAE (2015)	ODS 6, 13, 14 and 15
Worry about the environment	SEBRAE (2015)	ODS 6, 13, 14 and 15
Prevent pollution	Hart (1995) SEBRAE (2015)	ODS 6 and 7
Follow the environmental laws	SEBRAE (2015)	ODS 11, 13 and 15

Conscious material consumption		ODS 12
Seek more efficient technologies	Hart (1995)	ODS 9
Replace fossil energy with renewable energies		ODS 7
Maintain financial balance	SEBRAE (2015)	ODS 8
Efficient use of natural resources		ODS 12
Maintain information transparency	SEBRAE (2015	ODS 16
Make sustainable purchases	SEBRAE (2015)	ODS 8
Promote partnerships with other organizations	SEBRAE (2015)	ODS 17
Seek improvement of people's quality of life (internal and community)		ODS 1, 2, 3 and 10
Pursuing the employee well-being		ODS 3 and 8
Promote social inclusion		ODS 4, 5
Do not condone corrupt practices		ODS 16
Do not condone slave or child labor		ODS 8
Practicing gender equality and social responsibility		ODS 5
Promote employee development	SEBRAE (2015)	ODS 4 and 8
Promote a fair and pleasant workplace	SEBRAE (2015)	ODS 8
Carry out social responsibility		ODS 16
Follow labor laws	SEBRAE (2015)	ODS 8
Maintain ethical and transparent relationships	Ashley (2005)	ODS 16

Source: Created by the authors

Therefore, to develop the questions of the research instrument it was necessary first to define the main concepts that permeate the theme, later tracing a logical relationship between them, so that, in the end, it could result in a script of questions. The questionnaire was composed of 25 questions divided into four sections: selection of participants, environmental dimension questions, economic dimension questions, and social dimension questions. Despite being separate, they are closely related to each other and directly to the research object. In addition, each question had three closed-ended alternatives and one open-ended option. The latter was a space for the interviewee to describe other sustainable practices out of the options given, as long as related to the question scope.

4 Results

The research was directed to the vertical residential condominiums of the MRC and the focus was on the managers as respondents. Only apartment condominiums located in the MRC and which had the characteristics of an MSE were selected, concerning the revenues limit and the number of employees, according to the classification given by SEBRAE.

To verify if the vertical residential condominiums of the MRC were developing sustainable practices, the result of the data collection was carried out through the questionnaire sent to 132 managers, of which 81 participated, returning the questionnaire filled out.

Questions 1 to 6 were carried out to sort and select only the participants who should fit in the research, so in question 1 we sought to separate vertical residential condominiums from horizontal residential condominiums. In this case, 82% of respondents were classified as

vertical residential condominiums, therefore, only 66 condominiums were considered for further research.

In question 2, all 66 selected respondents claimed to be managers. In question 3, out of these 66 condominiums, 94% claimed to be from the MRC, thus, 61 condominiums were considered for the continuity of the research.

Based on the information from these first three questions, it was possible to proceed with questions 4, 5, and 6, which were intended to verify whether these condominiums were also classified as Micro and Small Enterprises (MSE).

Through the data obtained in questions 4 and 5, it was possible to get to the billing value of each condominium, multiplying the number of units in each condominium by the value of the condominium fee. After analysis, it was observed that the 61 condominiums had a gross annual value of less than R$ 4,800,000.00, therefore, qualifying as MSE in this topic.

With the information obtained in question 6, it was also possible to identify that all 61 qualified condominiums had less than 49 people on their permanent staff, thus, qualifying as MSE also in this aspect.

Once the stages of identification and selection of condominiums are completed, the analysis of the answers to questions 7 to 12, which addressed sustainable practices within the environmental dimension, are described as follows.

Thus, in question 7, 96.72% of the 61 condominiums showed concern with the preservation of drinking water, a high and important number, since according to the IBGE (2015), only 6.5% of urban households and 65.0 % of national rural households are not served by the drinking water supply service.

In question 8, 93.44% reported that they adopt actions and mechanisms that help to reduce the consumption of electricity daily, a very expressive number.

In question 9, 91.80% expressed concern about the correct disposal of solid waste generated, however, the IBGE (2018) pointed out that the country only collected 10% of what is potentially recyclable. Thus, although there is a concern in separating potentially reusable or recyclable materials, it may be that after collection, by public agencies, this work is wasted. In this matter, 7 managers (11.47% of the total) reported having partnerships with cooperatives for the selective collection of their solid waste, ensuring the reuse of potentially recyclable materials, including cooking oil, reused in the manufacture of other products.

In question 10, 86.89% reported promoting environmental awareness among residents, however, it is also important to measure the degree of awareness of these residents.

In question 11, 10% showed concern with the correct treatment of effluents generated. According to data also collected in the research, AGEMCAMP (2010) pointed out that 86.99% of the MRC's households were serviced with sewage collection and treatment, therefore, it is possible to say that most of these condominiums have their effluents correctly treated, something extremely positive in the context of environmental sustainability.

In question 12, 81.97% showed concern with the preservation of green areas but it is observed a great margin to increase this number.

After the evaluation of the answers that involved the environmental dimension of sustainability was concluded, the assessment of answers to the questions of economic dimension, questions from 13 to 17.

Therefore, in question 13, 54.10% showed concern with the use of renewable energies, that is, a very low number that deserves to be better emphasized by the managers.

In question 14, 100% showed, in some way, that their economic activities are carried out ethically and responsibly, however, sustainable practices different from the given options were not pointed out.

In question 15, 96.72% showed concern for the search for market innovations that contribute to making their operations more efficient, that is, a very positive number.

In question 16, 100% showed concern with the efficient consumption of materials in their operations, which directly reflect in the condominium costs, since the lower the consumption of materials, the lower their acquisition cost, also contributing to environmental sustainability, as it means fewer natural resources to manufacture these materials.

In question 17, 81.97% showed interest in partnering with other condominiums to solve common problems.

At this moment, the analysis of the answers to the questions involving the sustainability social dimension, that is, questions from 18 to 25.

Therefore, in question 18, 54.10% showed concern about the eradication of poverty in the community to which they belong, however, this is a very low number for such an important issue, because according to AGEMCAMP (2010), 13.78% of the MRC private households lived with the per capita income of up to half minimum wage per month, that is, many families were in poverty.

In question 19, 48.10% showed concern about the fight against hunger, but as in the previous question, there was again a very low number for a question about the social dimension, evidencing the need for greater attention from the managers to issues of this dimension.

In question 20, 65.57% showed interest in improving people's quality of life concerning health and well-being, however, in addition to the low number, the answers also remained among those options given in the survey, that is, evidencing the need for managers to develop other practices that show their concern for this very important social topic.

In question 21, 47.54% showed concern with the social inclusion of people through education, once again a low result that deserves greater attention from the managers.

In question 22, 44.26% showed concern with gender equality. The low concern of condominiums with this topic may also demonstrate that, in a way, it is a reflex of society, since according to the data collected and presented in the survey, IBGE (2015) pointed out that only 57.8% of women, aged 16 years or over were in formal jobs.

In question 23, 96.72% showed concern about decent work, however, in this case, there is a more satisfactory number for a question of the social dimension, however, this may be due to the existence of labor laws that, in a way, contribute to a more critical position of managers in this sense, since the condominium can be penalized if these laws are not complied with.

In question 24, 67.21% showed, in a way, concern about the social inclusion of people, especially those less favored. A result that is also low and deserves greater attention from managers, especially concerning the use of disabled people who are often in a situation of social exclusion due to their special condition, because according to IBGE (2018), 17.2% of the Brazilian population, or 32.8 million people have some functional limitation, according to data from the 2010 Census.

Finally, in question 25, 83.61% showed that they do not tolerate corrupt practices, slave or child work, a very satisfying number, but that also happens due to the existence of laws to fight these practices.

5 Final Considerations

Despite the number of documents involving the term sustainability, few studies were found about sustainability in a residential condominium, which makes this work relevant as it brought advances in this sense, contributing as a starting point for new studies on the topic.

Supported by the theoretical basis and the results of the empirical analysis, although limited to the cases assessed, it can be suggested that the vertical residential condominiums of the Metropolitan Region of Campinas (MRC) adopt, in a certain way, relevant sustainable practices in their daily activities. As a safeguard, in general, the research points out that there

is a greater emphasis on the economic dimension and less on the social and environmental dimensions.

It is understood, therefore, that the results presented can work as a guide and stimulus for vertical residential condominiums to implement or improve sustainable practices in their place of operation. With this, it can be considered that the research met the proposed goal, contributing to the expansion of the debate on the topic.

However, it is evident the need for condominiums to pay increasing attention to this topic and include it in their daily routine. At the same time, it is necessary to have a paradigm shift for those who live, work, and attend these places, so that the broad concept of sustainability can be achieved using sustainable practices.

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