

THE VOLUNTARY NATURE OF AN ENERGY RATING AS A CAUSE OF CONSUMER MISINFORMATION AND GREENWASHING PRACTICES

LA VOLUNTARIEDAD DE UNA CALIFICACIÓN ENERGÉTICA COMO CAUSA DE DESINFORMACIÓN EN LOS CONSUMIDORES Y PRÁCTICAS DE GREENWASHING

A VOLUNTARIEDADE DE UMA CLASSIFICAÇÃO ENERGÉTICA COMO CAUSA DE DESINFORMAÇÃO PARA OS CONSUMIDORES E DE PRÁTICAS DE GREENWASHING

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RESUMEN

El objeto de esta investigación es la calificación de eficiencia energética de las viviendas comercializadas por inmobiliarias y constructoras en la comuna de Santiago, Chile. De este modo, se analizó, a la luz de la normativa vigente, la publicidad contenida en las páginas web de 45 proyectos inmobiliarios en venta durante el mes de junio del 2024. En cuanto a la metodología utilizada para llevar a efecto este estudio, se recurrió, por un lado, al método dogmático –propio de los estudios realizados en el ámbito jurídico– y, por otro, a los métodos empírico-analítico y comparativo. Los resultados permiten concluir que la voluntariedad del etiquetado energético y la regulación existente en este ámbito deja expuesto al consumidor inmobiliario a decisiones de compra desinformadas e incluso, a prácticas de greenwashing ya que, no le es posible comprobar la veracidad de las afirmaciones publicitarias realizadas. Todos los proyectos analizados tienen un valor que va desde las 2000 a las 4000 UF y apuntan, en consecuencia, a los consumidores pertenecientes a la clase media (sector C2 y C3).

Palabras clave

consumidor inmobiliario, greenwashing, ecoblanqueo o lavado verde de imagen, eficiencia energética, información veraz

ABSTRACT

This research aims to review the energy efficiency rating of homes sold by real estate companies and construction firms in the city of Santiago. Thus, the advertising on the websites of 45 real estate projects for sale in June 2024 was analyzed in light of the current regulations. Regarding the methodology used to carry out this study, both the dogmatic method —typical of studies conducted in the legal field— and the empirical-analytical and comparative methods were employed. The results conclude that the voluntary nature of energy labeling and the existing regulations expose real estate consumers to uninformed purchasing decisions and even to greenwashing practices, as they cannot verify the truthfulness of advertising claims. All the analyzed projects are priced between 2,000 and 4,000 UF (US\$79,100 to \$158,200 – July 2024), consequently targeting consumers belonging to the middle class (C2 and C3 sectors).

Keywords

real estate consumer, greenwashing, eco-whitening or greenwashing, energy efficiency, truthful and timely information, energy rating of homes.

RESUMO

O objeto desta pesquisa é a classificação de eficiência energética de residências comercializadas por empresas imobiliárias e de construção na municipalidade de Santiago, Chile. Para tanto, a publicidade contida nos sites de 45 projetos imobiliários à venda durante o mês de junho de 2024 foi analisada à luz das normas vigentes. Quanto à metodologia utilizada para realizar este estudo, recorreremos, por um lado, ao método dogmático - típico de estudos realizados no âmbito jurídico - e, por outro, aos métodos empírico-analítico e comparativo. Os resultados levam à conclusão de que a natureza voluntária da etiquetagem energética e as regulamentações existentes nesse campo deixam o consumidor de imóveis exposto a decisões de compra desinformadas e até mesmo a práticas de greenwashing, já que não é possível verificar a veracidade das alegações publicitárias feitas. Todos os projetos analisados têm um valor que varia de 2.000 a 4.000 UF (de 436 a 872 mil reais – julho 2024) e, conseqüentemente, são voltados para consumidores de classe média (setor C2 e C3).

Palavras-chave:

consumidor imobiliário, greenwashing, eco-lavagem ou greenwashing, eficiência energética, informações verdadeiras e oportunas, classificação energética de residências.

INTRODUCTION

Not only is the construction phase of a building a source of pollution but so is its operation, given the emissions produced from its use and the consumption of energy and water in its operation (Alavedra et al., 1997). In fact, buildings are one of the primary sources of energy demand and carbon dioxide (CO₂) emissions into the atmosphere (Wegertseder et al., 2014; Chavarry et al., 2023). In this vein, the factor that influences buildings' environmental impact most during their useful life is energy consumption for heating and cooling (Castillo, 2019).

Efficient building design can play a fundamental role in the fight against climate change, and incorporating strategies to reduce environmental impact and increase eco-efficiency in the entire value chain can help reduce Greenhouse Gas (GHG) emissions. In this sense, it is essential to recognize that energy consumption is a crucial sustainability indicator, and decreasing its use is a significant step towards sustainable construction principles (Muñoz et al., 2012). By providing environmental benefits, energy efficiency also brings economic savings for the building's users (Chavarry et al., 2023).

According to a study conducted in February 2021¹, Chilean consumers are increasingly interested in purchasing sustainable or efficient housing. In fact, the study showed that 80% of those who intend to buy a home in the Metropolitan Region would value that it is sustainable. However, in most cases, the basis for the decision does not rest, as one might think, on caring for the environment but on the expected savings.

However, it is observed that most residential projects are advertised without mentioning energy efficiency among their real estate benefits or attributes. Although some projects have an energy rating, they only display the respective seal. Most do not explain the attributes or amenities that make the homes or the project gain such a rating and the implications that derive from it. On the other hand, this scenario facilitates misleading advertising, particularly greenwashing, which consists of marketing a product as sustainable or

environmentally friendly when it is not (Lyon & Maxwell, 2011).

In this way, real estate and construction companies advertise different attributes, claiming energy savings. The lack of information, in this regard, makes this type of message decisive in the purchase decision. However, having specific attributes – for example, thermopanel systems or special ventilation systems - does not necessarily make the house efficient or produce energy savings. Moreover, it has been argued that there is a proliferation of misleading environmental claims in advertising real estate projects (Tateishi, 2018; Shahrim et al., 2017; Cheng et al., 2023).

In this context, this research aims to elucidate how voluntary energy labeling influences the advertising content of real estate projects and determine which position consumers take when faced with advertising claims related to energy savings and efficiency.

METHODOLOGY

The dogmatic method – typical of studies carried out in the legal field – was used to analyze current thermal insulation and energy efficiency regulations. Expressly, Law N°21.305 of 2021 on Energy Efficiency (EEL) and the Thermal Regulation (TR) contained in Article 4.1.10 of SD No. 47 of 1992 [MINVU]. This method was also used to determine whether advertising claims related to energy efficiency are integrated into the sales contract in light of Law No. 19,496 of 1997 on the Protection of Consumer Rights (PCRL). At the same time, misleading advertising and greenwashing were studied from a legal perspective.

On the other hand, the empirical-analytical method was used to determine the importance that real estate and construction companies attach to energy efficiency when advertising their real estate projects and, in particular, if real estate consumers can make an informed purchase decision when choosing their home. In this way, the advertising of 45 real estate projects offered for sale in the municipality of Santiago during

1 The study was carried out by StatKnows on behalf of and with technical support from EBP Chile. The survey was applied to a probabilistic sample of 3,765 people over the age of 20 who were looking for a home during the last three months in the Metropolitan Region. The estimated sampling error is 1.21%, with a confidence level of 95%. Information is available at: <https://www.elmostrador.cl/generacion-m/2021/02/22/encuesta-revela-amplias-oportunidades-del-nuevo-mercado-del-desarrollo-inmobiliario-para-el-ahorro-con-positivo-impacto-ambiental/>

June 2024, disseminated through the websites of the respective real estate agencies or construction companies, was examined.

The comparative method was then used to obtain statistically representative data. Using these, the percentage of projects whose advertising lacks the necessary information to make good purchasing decisions and those whose advertising can rightly be qualified as misleading or at least confusing was identified.

RESULTS AND DISCUSSION

SUSTAINABILITY, ENERGY EFFICIENCY, AND THERMAL INSULATION

So-called “sustainable construction” seeks to optimize resources in building planning, design, construction, and operation processes to minimize environmental and health impacts (Framework Collaboration Agreement on Sustainable Construction, 2012). One of its key elements is the reduced use of energy sources. In this sense, it should be noted that the amount of energy used to heat a building depends mainly on its thermal insulation. In fact, homes consume almost 15% of the country’s total energy, mostly used for heating (División de Energías sostenibles, Public Sector Results Report - Law 21.305, 2022). This shows the close relationship between the Thermal Regulation (TR) and the Energy Efficiency Law (EEL).

The TR establishes the minimum thermal transmittance conditions that must be met by the elements in the housing envelope (Article 4.1.10 N°1.A). The envelope is “the mechanism of a building to ensure indoor habitability and comfort, and energetically, it is a decisive factor of energy efficiency” (Escorcía et al., 2012, p. 565). The Official Chilean Standard NCh 853-2007 (repealed in 2008) defined thermal transmittance as the “heat flux that passes through the element’s unit surface area and per degree of temperature difference between two environments separated by said element.” Thus, the lower the thermal transmittance, the better the house’s insulation and the lower the energy expense.

The elements of the housing envelope included in the current Chilean TR are the roofs (incorporated in 2000), the perimeter walls, and the ventilated lower floors (both included in 2007). However, these minimum conditions need to be improved, as they do not effectively contribute to energy efficiency and environmental care (Holm Oaks et

al., 2019; Escorcía et al., 2012). Its most significant deficiencies are related to thermal zoning and the approach to the requirements imposed on construction (Caldera, 2012).

In the middle of 2013, updating the TR began. The original proposal covered essential aspects to limit energy demand and improve the building’s indoor environmental quality (thermal insulation of ground floors, doors, and windows; airtightness and ventilation). However, in 2021, when the resulting standard (NTM 011) was about to be decreed, around 900 architects expressed their concerns, arguing that it was a limitation on the freedom of architectural design. The Association of Architects’ Offices (AOA) formed a working group to develop an alternative proposal, which was supported by the Chilean Chamber of Construction (CChC) and presented to the Ministry of Housing and Urbanism (Trebilcock, 2023). As a result, stagnation in the update has affected consumers and compliance with the government’s goals in environmental matters, which were included in 2022’s National Energy Efficiency Plan [2022-2026].

Finally, on May 16th, 2024, the Office of the Comptroller General of the Republic registered the decree amending the OGUC (General Ordinance on Urban Planning and Construction)– specifically its Articles 4.1.10 and 4.1.10 bis – which updates the standards and technical standards related to thermal conditioning. Consequently, among other things, it incorporates improvements associated with the thermal requirements of walls, ventilated floors, and stem walls. However, according to the first of its transitional provisions, these modifications will apply to new homes 18 months after publication in the Official Gazette. Therefore, seeing the effects of the update will take even longer.

The EEL, for its part, in its article 3, paragraph 2, provides that public buildings, commercial buildings, office buildings, and homes must have an energy rating (CEV, in Spanish) similar to that of cars or appliances to obtain their definitive reception. According to the Ministry of Housing and Urbanism’s “Manual for the Energy Rating Procedures of Homes in Chile” (CEV Manual, 2019), a home’s energy rating “consists of determining its energy efficiency, using an energy rating report and an energy efficiency label.” Consequently, it reflects how the building behaves from an energy perspective. More specifically, it is “a theoretical estimation of the energy demand for heating, cooling, domestic hot water, and lighting.” It is presented comparatively to a model dwelling and has an eight-level rating scale, ranging from

“A+” to “G,” the latter being the least efficient (CEV Manual, 2019). On the other hand, real estate projects in the construction process must have a temporary “preliminary energy rating.” Hence, the preliminary rating is made on projects with the respective building permit approved by the Director of Municipal Works, and the Rating is on projects that already have the final reception (Article 3, paragraph 2 of the EEL).

Thus, the EEL modified the scenario regarding sustainability; however, it still cannot be applied to housing. In fact, it started to govern housing in February 2023. This same law stated that it would begin to apply to residential projects 12 months after the approval of the regulation that establishes the procedure, requirements, and conditions for granting energy ratings and preliminary ratings and their advertising, which should have been done in February 2022. However, the Ministry of Housing and Urban Planning (MINVU, in Spanish) has yet to issue this regulation. Article 3 of the EEL provides in its final paragraph that “all of the above is understood, notwithstanding the faculty of any natural or legal person, to request the energy rating and preliminary rating following current legal regulations.” Thus, energy labeling is currently voluntary for housing.

According to the EEL, homes built before 2000 (which, therefore, do not have any thermal requirements) will be rated with the letter G; homes that meet the requirements for roofs with an F, and those that observe the provisions applicable to roofs, walls and ventilated floors, with an E; i.e., those that comply with the current TR. Finally, homes with adequate savings and environmental quality will be rated with the letters C and D, and homes with a high energy efficiency purpose will be rated with A and B. As can be seen, the letters A, B, C, and D can only be assigned to homes that are more energy-efficient than the current building standard (Figure 1).

It is important to remember that the letters are referential, and there are energy savings ranges between letters. Thus, obtaining a good energy rating will require a set of factors. The rating obtained will also be influenced, for example, by the house’s orientation and, consequently, the exposure to solar radiation. Hence, two houses can have the same construction standards but different energy performances due to their orientation.

The energy rating required by the EEL seeks to inform consumers about the property’s energy costs before purchasing by granting an energy efficiency label and a rating report. The label

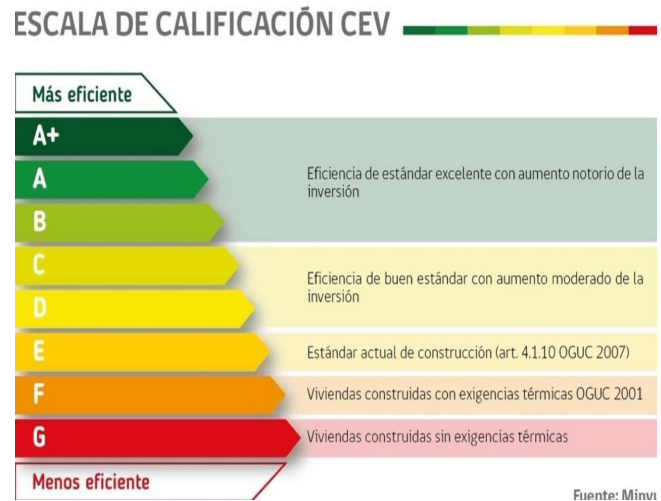


Figure 1. CEV rating scale. Source: Minvu (2019).

provides summarized information on the energy performance of the evaluated home, a preliminary rating, and another for the energy rating of the homes (CEV Manual, 2019). There is also an Energy Efficiency Seal (Figure 2) that shows the primary energy efficiency indicators of the dwelling or the housing complex; in the latter, said seal will consider a weighted percentage of the energy savings (CEV Manual, 2019).

THE ADVERTISING OF THE REAL ESTATE PROJECT AS AN INTEGRAL PART OF THE PURCHASE AND SALE CONTRACT

Advertising often describes housing projects as energy efficient, which is attractive to consumers because of the savings it entails. It is worth asking if such statements are included in the sales contract and, as such, if the consumer can sue for their breach.

Article 1 N°4 of the PCRL (regulation of article 18 paragraph 7 of DFL N°458, of 1976, approving the Law on Urban Planning and Construction [LGUC]) states that advertising has an objective side aimed at informing consumers and a subjective side aimed at persuading them to make the final decision to acquire the advertised good. Only the objective side of advertising is included in the sales contract and can be demanded by consumers (Momberg, 2007; De la Maza, 2013a).

To determine whether advertising claims about energy efficiency without any scientific support belong to the objective side (and, consequently, are included in the contract), it must be kept in mind that the basis of advertising is the protection “of the legitimate expectation of reasonable



Figure 2. Energy Efficiency Seal. Source: CEV Manual (2019), pp. 59-60.

expectations that the consumer has formed regarding expressions that, pre-contractually, the offerer has issued" (Isler, 2020). The key is in protecting that trust (López, 2019). That is to say, advertising information that the average consumer can reasonably rely on must be included in the contract (De la Maza, 2013b), meaning by such, those intrinsically vulnerable subjects who are unable to properly and promptly process the information that is available on the market (Isler, 2011). In conclusion, those plausible conditions for an average consumer should be respected (Isler, 2020).

However, as analyzed in this research, the following aspects must also be considered: 1) advertising usually describes specific attributes to which, given their characteristics, they attribute the benefit of producing energy savings; 2) many of these attributes have a complex or challenging to understand operation; for example, double-coated walls, high-performance thermal envelope, EIFS system, high-efficiency ventilation, convective ventilation, among others; 3) in most cases, the consumer will only be able to corroborate if they actually produce the promised savings after a while; in fact, in many situations it will be very difficult to confirm; 4) faced with the lack of understanding or available information, consumers often turn to "brand personality" as an alternative source of information (Sander et al., 2021; Aaker, 1997 and; Freling & Forbes, 2005), which plays a vital role in the ad's credibility (Sanders et al., 2021, p. 436) and, 5) most real estate projects are bought off-plan; i.e., whose construction is not completed and, therefore, do not have the definitive reception (Caprile, 2008). In these cases, consumers cannot review the property's attributes or operation, as the showhouse or apartment may not be ready.

Accordingly, it is argued that such expressions generate reasonable trust in consumers, who can consequently sue based on breach of the advertising.

GREENWASHING AS A PARTICULAR TYPE OF MISLEADING ADVERTISING AND NON-COMPLIANCE WITH THE DUTIES OF INFORMATION

Law N°19.496 of 2019, in article 28 of the PRCL, provides that "he infringes the provisions of the law, who, knowingly or should have known and, through any type of advertising message, induces error or deception regarding certain characteristics and conditions of the product that are described in each of its sections." Specifically, its letter f) alludes to the condition of not causing damage to the environment and quality of life. Although the PRCL does not expressly talk about greenwashing, it does recognize the behavior, configuring a particular hypothesis of misleading advertising (Fernández, 2021). However, the regulation does not cover all manifestations of this behavior.

In this sense, on May 31st, 2022, a draft bill was presented that, according to Article 1, aims to prevent, regulate, and punish greenwashing (Bulletin N°15.044-12, 2022). Article 2 defines the figure but also enshrines other relevant concepts. One is "sustainability advertising," which is essential to understand greenwashing. According to the standard, this consists of "all advertising communicating responsible and sustainable practices of companies, their brands, products, and services." Likewise, Article 2 letter b) defines "greenwashing" as "Sustainability advertising carried out in contravention of the provisions of this law." As can be seen, it is an open standard that requires content on a case-by-case basis.

The bill also seeks to replace the aforementioned article 28 letter f) of Law N°19.496 (Isler, 2020). According to the proposal, the supplier of a product commits an infringement that, through advertising, induces error or deception regarding: "Its condition of not causing harm to the environment or the quality of life or of having characteristics that are explicitly or implicitly stated as beneficial to the environment ...". If the proposal is compared with the current standard, it is possible to notice that the latter, at least literally, omits that assumption contemplated in the bill that consists of advertising characteristics of the product as beneficial for the environment and people when, really, they are not. This is precisely what happens when the supplier attributes energy efficiency to the dwelling because, in some way, he is signaling that it will collaborate in reducing the carbon footprint when it is not so.

When the error or deception is related to a home's energy efficiency, the conduct is also related to letter c) of the aforementioned law (Isler, 2020), which refers to "the relevant characteristics of the good or service highlighted by the advertiser or that must be provided following the commercial information standards." Obtaining a direct benefit with the purchase of the house, consisting of saving money because of the decrease in energy expenditure, is a relevant characteristic that influences the purchase decision. However, the bill is currently being processed (first constitutional procedure).

Thus, given that there is little regulation on greenwashing currently, several actors have proposed rules on the matter. An example of this is the "Green Communication Guide" - a document prepared in 2014 by Fundación Chile in collaboration with diverse actors such as Sernac, the Council of Self-Regulation and Advertising Ethics, and the Ministry of the Environment. The document talks about the "seven sins of greenwashing." When analyzing housing advertising, it is possible to highlight two "sins"². The first is "the lack of evidence," which refers to assumptions about the environmental attributes communicated that

cannot be corroborated by reliable information or certifications. In this sense, the Code of Advertising Ethics of the Council of Self-Regulation and Advertising Ethics (CONAR) provides that assertions of the type "compatible with the environment," "ecologically safe," "green," "sustainable" or any other that suggests that the product does not impact the environment or only does so positively, must have a clear demonstration that supports them (Article 27).

On the other hand, the PCRL enshrines "the right to truthful and prompt information about the goods and services offered, their price, contracting conditions, and other relevant characteristics thereof ..." (Article 3 letter b). The provider then must provide such information. In this part, it should not be forgotten that real estate companies and construction companies engaged in selling real estate are suppliers under the law. The International Organization of Consumer Unions (IOCU), referring to the comparative experience, states that an educated and informed consumer has a more regular behavior in the market. Any decision-making requires as much information as possible. Although the generation of information always has a cost, the consumer will be willing to pay it to the extent that it benefits him (Barrientos, 2024). However, it is warned that there is no fundamental knowledge of what the energy efficiency of a house implies, what the CEV consists of, or other instruments in the field of sustainable construction (Jiménez *et al.*, 2023). In general, it is seen that there are also no campaigns led by the Ministry of Housing and Urban Planning, the Ministry of Energy, Sernac, or any consumer association aimed at educating consumers on these matters.

Under Article 3, paragraph 3 of the EEL, the energy efficiency label and report must be included in the project's advertising. According to this law, both constitute basic commercial information defined in Article 1° N°3 of the PCRL as "the information, instructions, background information, or indications that the supplier must compulsorily provide to the

2 The remaining sins are as follows: 3) *Sin of Vagueness*: This consists of the vagueness used when mentioning the environmental attributes of the respective product, which can confuse the consumer; 4) *Sin of irrelevance*: minimum requirements required by law are mentioned as attributes; 5) *Sin of the lesser of two evils*: This occurs when, for example, a specific company says it is a leader concerning its competence in caring for the environment, but due to the nature of the product, it has an important environmental or social impact. For example, organic cigarettes and; 6) *Sin of fibbing*: The company proclaims itself as green under false arguments; for example, it alludes to some certification it does not have. Sin of the hidden trade-off that consists of advertising based on a group of attributes but leaves aside others that may have the same or greater environmental and social impact. Source: Green Communication Guide, 2014, p. 21.

consumer, in compliance with a legal regulation.” This highlights the importance that the legislator attaches to the labeling content and the respective energy efficiency report.

However, beyond the express consecration of this duty in the EEL and the lack of a regulation that can make it operational, the truth is that the PCRL imposes the duty to inform, and establishes the standards that such information has to meet. This leads to the conclusion that information regarding energy efficiency should be provided. However, it is observed that, in general, real estate and construction companies that voluntarily submit to the energy efficiency rating do not transmit the implications of the rating obtained. Therefore, it is hardly likely to be understood by consumers. It is not just any information but rather highly complex information; consequently, it is a real challenge to establish how it should be made known to consumers for their proper understanding. The respective regulation must solve this problem.

It should be noted that Article 3 of Law No. 19.496 of 2019 aims to prevent, regulate, and punish greenwashing; it also reiterates and specifies specific information duties established in the PCRL. Thus, “companies that advertise sustainability must provide complete, truthful, verifiable, understandable, and accurate information and may not omit relevant background information that may mislead.” If this law is passed, the scope of this duty in light of the PCRL will need to be determined in each case. At the same time, it establishes that companies that advertise sustainability must keep information about their environmental practices available, accessible, and permanently updated on their websites.

RESULTS OBTAINED FROM STUDYING THE ADVERTISING OF REAL ESTATE PROJECTS ON SALE

The advertising of 45 real estate projects offered for sale in the municipality of Santiago during June 2024, disseminated through the websites of the real

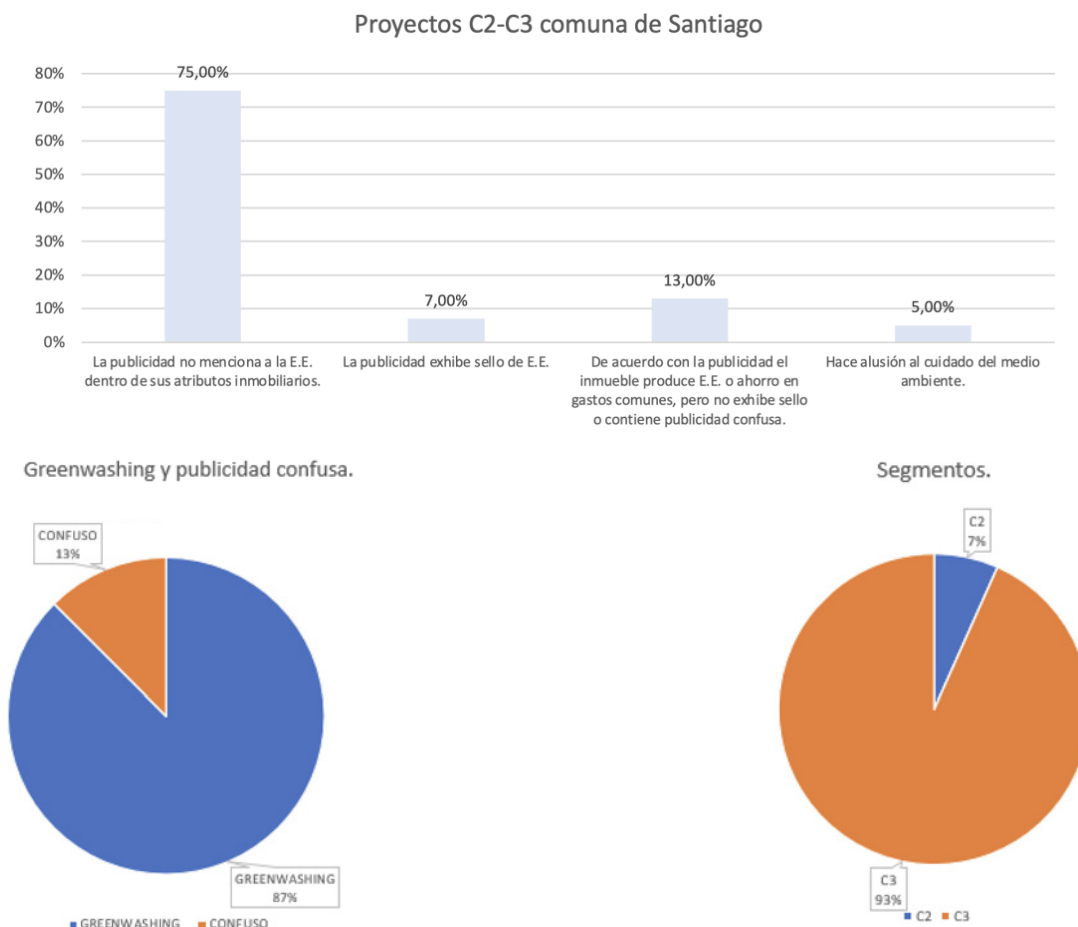


Figure 3. Results obtained from the analysis of the advertising disseminated in 45 real estate projects located in the municipality of Santiago related to energy efficiency. Source: Preparation by the Author.

estate or construction companies, was reviewed. The prices of all projects range from 2000 to 4000 UF (Development Units). The advertising for the dwelling's energy efficiency was examined using the PCRL.

An overview of the advertising on energy efficiency made for the real estate projects on sale and the information consumers have in this matter is provided below. The advertising analyzed was divided using the following criteria: a) one that does not mention energy efficiency (EE) as one of its attributes focusing on other amenities; b) one that exhibits an energy rating seal (ER) whether it is the one given by the Ministry of Housing and Urbanism or another entity; c) advertising that offers energy efficiency or savings in administrative fees within its attributes without exhibiting an EE seal or a specific rating without the possibility of knowing whether the project has undergone some rating process and, d) one that alludes to the care of the environment and sustainability. Subsequently, considering the prices of the units for sale, the socio-economic sector to which it was aimed was established, and a distinction was made between the sales methods used (buy off-plan, during construction, or with immediate delivery). This panorama is presented through the following graphs (Figure 3).

As can be seen, the advertising for 34 projects (75%) does not reference energy efficiency, energy savings, cost reduction, or environmental care. It is possible that this is not only due to the voluntariness of energy labeling but also to the fact that consumers are unaware of what it means. Therefore, middle-class consumers belonging to the social categorization segments C2 and C3, considered in the values of the units for sale, seem to value other attributes or characteristics such as connectivity, the equipment of shared spaces, and even special spaces for pets. Consequently, in all these cases, there is a lack of information that is relevant when making the purchase decision; however, this is not noticed by consumers due to the scarce information available and the absence of plans or programs aimed at educating consumers in these matters.

The study showed that only three of the 45 evaluated real estate projects, equivalent to 7%, were subjected to the energy rating process. However, in most cases, the explanation of what the rating obtained means or its implications is omitted. In fact, only one of the projects had more detailed information on this point.

On the other hand, the advertising of 6 projects reviewed (13%) can be qualified as greenwashing because it affirms that the project or its units are efficient or produce energy savings and, with it, a decrease in heating costs or administrative fees. However, it does not exhibit the CEV or any other type of certification or scientific support that allows corroborating such claims. In this way, even though energy labeling is voluntary, the truth is that advertising for such projects does not comply with the rules included in the PCRL and the information duties required of real estate and construction companies in their capacity as "suppliers." It should be noted that, in accordance with Article 24 of the PCRL, misleading advertising incurs a fine for the offender of up to 1500 UTM (Monthly Tax Units). The regulation adds that if such advertising affects product qualities that affect the environment, a fine of up to 2250 UTM may be imposed. If the bill that aims to regulate greenwashing is approved, such fines will be considerably higher. However, it is not always easy to notice that practices of this type are used.

During this research, an advertisement classified as "confusing" was identified because, although it does not expressly talk about "energy efficiency" or "savings," it refers to more comfortable environments throughout the year or to homes capable of maintaining pleasant temperature standards or thermal comfort, which is usually done after mentioning specific real estate attributes related to thermal insulation. In these cases, it is possible that the consumer deduces from these statements that the house is efficient or will imply a saving in energy expenditure and, therefore, its costs. However, the qualification of "misleading" advertising is more debatable. Advertising for one of the six mentioned projects has these characteristics.

The advertising of only two projects somehow alludes to the care of the environment. This number is consistent with the study's results above, as it reflects that consumers, as a rule, are not so interested in the possibility of reducing the carbon footprint or the ecological character that housing may have.

CONCLUSIONS

In practice, the voluntariness of energy labeling translates into a lack of available information on energy efficiency, incomplete information, or

information provided without scientific support, thus favoring practices such as greenwashing. Such misinformation leaves consumers disadvantaged, preventing them from making a purchase decision that best fits their needs and interests.

Under the EEL, the information in the energy rating report must include the advertising for the real estate project; therefore, establishing how this should be made known to consumers for their proper understanding, especially considering its complexity and highly technical nature, is still pending. This must be accompanied by training or compliance plans for real estate and construction companies and educational plans focused on consumers.

The current regulations that regulate misleading advertising allow fining for tax benefit the supplier that resorts to these when offering their products and, simultaneously, allow consumers who are victims of such practices to sue civilly for breach of the advertising conditions once the harm has been suffered. In this sense, the draft bill that seeks to regulate greenwashing increases the applicable fines and specifies specific information duties. However, there are no preventive controls to protect consumers against these behaviors and, consequently, allow them to have the proper information before purchasing a home. In this way, the real estate consumer can only be adequately protected when the energy rating is mandatory and with the same criteria. As long as this does not happen, they will continue to be exposed to this type of practice and purchase decisions without having relevant information.

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