GREEN MARKETING AS A DETERMINANT OF COMPETITIVE ADVANTAGES IN B2B MARKETS

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Abstract: Given the fact that in the professional literature on marketing, and especially in the segment of green (environmental) marketing, much more research is done and written about B2C markets, this paper is an attempt to explore procurement motives and behaviour of business customers during the complex purchasing process, on the example of several important thermotechnical devices, on the B2B market in Vojvodina. The research aims to collect relevant data from business customers through direct interviews regarding the impact of environmental performance on the procurement of gas boilers, heat pumps and air conditioners in order to obtain quality and reliable information based on the process, that is, conducted the descriptive statistical analysis, which will enable a better understanding of this complex issue. To collect qualitative data, the method of the unstructured deep interview was used. The results confirmed the research hypotheses and indicated the necessity of green marketing in current business conditions. It is indisputable that soon only organisations focused on green marketing and green marketing channels, that is to say, those which are focused on creating their own optimal relationship between their production, distribution and/or sales process, and environmental protection, will be able to gain a competitive advantage in dynamic business markets and achieve maximum satisfaction of environmentally demanding customers, and thus, in fact, at the same time give their full contribution to the sustainable development of the entire community.

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ZELENI MARKETING KAO DETERMINANTA KONKURENTSKE PREDNOSTI NA B2B TRŽIŠTIMA

Sažetak: S obzirom na činjenicu da je u stručnoj literaturi iz marketinga, a pogotovo iz segmenta zelenog (ekološkog) marketinga, mnogo više istraživano i pisano o B2C tržištima, ovaj rad predstavlja pokušaj da se istraže motivi nabavke, kao i ponašanje poslovnih kupaca tokom složenog procesa kupovine, na primeru nekoliko značajnijih termotehničkih uređaja, na B2B vojvođanskom tržištu. Cilj istraživanja je da se putem direktnog intervjuisanja prikupe relevantni podaci od poslovnih kupaca u vezi sa uticajem nekih ekoloških performansi na nabavku gasnih kotlova, toplotnih pumpi i klima uređaja, kako bi se na bazi njihove obrade, odnosno sprovedene deskriptivne statističke analize dobile kvalitetne i pouzdane informacije, koje će omogućiti bolje razumevanje ove kompleksne problematike. Za prikupljanje kvalitativnih podataka upotrebljen je metod nestrukturiranog dubinskog intervjua. Dobijeni rezultati su potvrdili istraživačke hipoteze i ukazali na neophodnost primene zelenog marketinga u savremenim uslovima privređivanja. Nesporno je da će uskoro samo organizacije fokusirane na zeleni marketing i zelene kanale marketinga, odnosno fokusirane na kreiranje optimalnog odnosa između svog procesa proizvodnje, distribucije i/ili prodaje, i zaštite životne sredine, moći ostvarivati konkurentsku prednost na dinamičnim poslovnim tržištima i postizati maksimalnu satisfakciju ekološki sve zahtevnijih kupaca, a na taj način, faktički, istovremeno daće i svoj puni doprinos održivom razvoju čitave društvene zajednice.

Ključne reči: zeleni marketing, B2B tržišta, ekologija, održivi razvoj, konkurentska prednost

1. INTRODUCTION

Environmental issues are not only the focus of marketing. On the contrary, at the beginning of the third decade of this century, ecology is the focus of the whole economy. Luckily, it represents one of the key segments that is increasingly talked about and discussed - it also operates more intensively and efficiently on a global scale. As for the situation in the Serbian economy and society, in recent years, there has been a noticeable interest of all relevant entities in environmental (green) issues, but it is still at a much lower level, much lower intensity, and unfortunately, with much less concrete activities and

real results, compared to developed economies. However, things are changing in that field as well. One of the clear indicators of the accelerated raising of environmental awareness in our society is the current, united struggle of tens of environmental and green organisations and associations, started in the middle of 2021, against lithium and pine mining in Jadar in order to prevent a large scale environmental catastrophe due to the application of old technology of exploitation and processing of jadarite ore. In fact, with the currently planned and available technology of ore exploitation and processing, there would be substantial and dangerous water and land pollution in that area and beyond. Even the river Drina, through the tributary Jadar, would be poisoned to such an extent that it could contaminate more distant areas along its entire course and even the river Sava, into which it flows near Sremska Rača. Bearing in mind that the Sava flows into the Danube near Belgrade, at first glance, it can be reasonably assumed that the consequences of this potential environmental catastrophe would be felt very quickly in the capital, which is at a distance of about 130 kilometres.

Through their economic and also other activities, wanting to satisfy their needs and desires for food, clothing, furniture, comfortable housing, cars and various other products and services, people indisputably, around the planet, endanger and pollute the environment, sometimes even to that extent that it could be called ecocide, which is the complete destruction of a space or territory, due to uncontrolled and unreasonable use of the natural environment, by harmful technologies and toxic chemical, biological and other means. In that context, it is crucial to keep in mind sustainable development, which means a controlled, socially responsible approach to the use of natural and other resources by the current population on our planet, in order not to endanger the survival and development of future generations (Nikolić, Kostreš, Mladenović & Polić, 2017).

Marketing as a scientific discipline, especially as a practical economic activity, is very sensitive to events, activities, subjects and forces from its micro and macro environment. Precisely this sensitivity and understanding of time, one might even say - the anticipation of future events, and not only in the market, but also wider, in the entire community, contributed to the fact that marketing before the end of the twentieth century began to deal intensively with ecology and the environment protection (Dahan & Arenkov, 2021). Marketing, as a modern business concept, with its theoretical but also practical segment, has unequivocally pointed to the potential compatibility of the economy, that is to say, business and ecology - insisting on responsible and controlled production, distribution (green marketing channels) and exchange, as well as reasonable consumption, and proper disposal of used products (consumer behaviour), so as not to endanger the immediate environment, but also the entire ecosystem,

which is the overall unity of living beings and the spaces in which they exist (Green Limes; Jovičić, 2021). Much more attention and criticism from the public are marketing activities undertaken by managers and marketers in organisations that produce and/or sell products in the markets for goods at final consumption (B2C) than those in business (B2B) markets. This is logical since the number of final consumers/customers who perform incomparably more transactions daily, which is to say that purchasing a wide range of products for their personal and family needs, is much higher than the number of purchases in business (industrial) markets. In this context, it is quite logical that the first remarks and discussions on ecology and environmental protection and justified criticism of irresponsible and environmentally harmful production, sales, distribution and transportation of products first appeared in consumer goods markets (Manongko, Tamboto & Watung, 2020). The real and concrete environmental problems in economic practice were further aggravated by many ethical issues, which directly correlate with ecology and environmental protection (Jovičić, 2020). Consequently, this complex matter could not be effectively solved by managers and marketers ad hoc in the market. Many theorists in marketing, geography, demography, sociology, psychology, law, technical and technological sciences, and ecology and environmental protection contributed to solving the most acute environmental problems. They also pioneered theoretical contribution to the emergence and development of environmental, i.e. green marketing as a new, sophisticated and modern marketing concept (Nadj, 2010; Bregović Pračić, 2020). With a certain time distance in relation to B2C marketing, and in business markets, with a slightly lower intensity, managers and marketers begin to deal with ecology and environmental protection issues. Also, theoretical thought begins to monitor and research this issue, so there are professional papers focused on environmental questions within industrial, That is the B2B marketing, which will be discussed in further detail in the next chapter (Mehdikhani & Valhohammadi, 2021; Riza & Li, 2022; Blenkhorn & MacKenzie, 2017).

Considering all the above, it is imperative for organisations in B2B markets, if they want to operate competitively and profitably, to maximally respect all environmental and ethical principles to achieve their business goals. Of course, a profitable and socially responsible business is possible only with the prior achievement of satisfaction of its customers and the general well-being of the wider community. That means minimising the adverse and harmful effects of the entire production, distribution and sales process on people and the environment. With efficient coordination of all three segments: organisations (companies), customers (consumers) and the community, and sophisticated synchronisation of their partial interests, company management would successfully create and effectively implement in practice a modern concept of

socially responsible marketing, or sophisticated concept of socially responsible business.

2. LITERATURE REVIEW

In the professional literature, in terms of terminology and green marketing, there is no single, generally accepted point of view. Some authors consider terms such as environmental marketing, green marketing, eco-marketing, sustainable marketing, environmentally responsible marketing and similar to be synonyms, implying a wide range of sophisticated business activities and the need to apply the concept of corporate social responsibility (Tolušić, Dumančić & Bogdan, 2014). In this context, the company's success is not only measured by the achievement of economic business goals, that is, by profitability, productivity, competitive advantage, dominant market share, etc., but by corporate social responsibility, care for the community and care for the natural environment in the broadest sense. Environmentally committed companies, that is, the companies whose managers have a high level of environmental awareness, have a wide range of activities and "green action" to effectively align their business goals with the interests of society and ensure ecosystems are preserved and protected. First, they increase the care for employees' health, improving workplace safety and protection. Next, they procure modern technology, which reduces or completely prevents environmental pollution (soil, water and air). They also create and implement green marketing channels, i.e. ensure environmental (recycling) packaging and the use of electric transport vehicles. They organise green promotion, intensifying cooperation with the local community in the context of ecology and environmental protection. Numerous activities are related to building and maintaining long-term good business relationships with all stakeholders to coordinate and synchronise all global green, ethical and socially responsible activities. Working on all these, but also other similar activities, which contribute to the well-being of companies, society and the environment, environmentally conscious managers will bring seemingly irreconcilable and divergent segments, such as the economy (earnings), broader social interest and care for environmental protection, in an optimal balance, in a compatible relationship, which will undoubtedly contribute to the realisation of the global concept of sustainable development.

When it comes to ecology, ecological marketing, green products, green marketing, organic products, etc., there is much literature (textbooks, professional articles and research) on the production, promotion, distribution and sale of agricultural products, especially on organic agriculture and organic food (Đurić, Glamočlija, Janković, Dozet, Popović, Glamočlija & Cvijanović,

2018; Križanec, Lončarić & Bagarić, 2018; Marušić Lisac, 2017; Vehapi, 2019).

There is no generally accepted definition of green marketing. Some authors experience and interpret it in a narrower and some in a broader context. Some authors consider it a synonym for environmental, eco-marketing or sustainable marketing, whereas others distinguish among the listed terms. One of the more representative and widely accepted definitions, by the American Marketing Association, emphasises that green marketing refers to the development and marketing of products that are assumed to be environmentally safe or designed to minimise negative effects on the physical environment or even to affect the improvement of its quality (American Marketing Association). As mentioned, some authors distinguish between the terms used so far (environmental, green and sustainable marketing) and do not consider them synonyms. According to them, green marketing is a concept that focuses on the need for change in consumption, that is, consumer behaviour, suggesting more moderate and responsible consumption, as well as responsible and safe disposal of products. In contrast, the pioneering, somewhat older concept of environmental marketing primarily designated repairing the consequences of irresponsible production and outdated, environmentally harmful production processes. The concept of sustainable marketing, which is the most recent and most comprehensive, encompasses all relevant participants, from organisations (companies engaged in production, sales and logistics of products), through a wide range of final and business consumers/users, all the way to the environment in the broadest meaning of that word (Charter, Peattie, Ottman & Polonsky, 2002). Based on the three directions of presenting the genesis of marketing, can be seen the evolution of environmental thought from post festum response to the harmful effects of production, distribution (marketing channels and marketing logistics) and consumption (consumer behaviour) on the environment, or taking subsequent measures to mitigate or eliminate towards preventive response - in order to timely prevent the negative consequences of the economy on the ecosystem, which is personified in green marketing. Sustainable marketing is the most complex and effective marketing concept, which has evolved from ecological to green. It implies proactive action. Based on previous business and environmental knowledge and practical experience, it tries to anticipate future developments in marketing, sociology and ecology, offering holistic, efficient and sustainable solutions to all open issues related to ecology and environmental protection. Based on the above, it can be concluded that sustainable marketing, which is based on the philosophy and principles of corporate social responsibility, could significantly contribute to achieving sustainable development of the entire community.

In this context, after the different views and interpretations of the term green marketing presented above, and without pretending to give a complete and comprehensive definition, perhaps green marketing could best be described as a coordinated and synchronised approach to the whole business focusing on environmental needs and desires of conscious consumers, and profitable, socially responsible business, which is compatible with environmental principles and maximum environmental protection, in order to ensure the long-term sustainable development of all humankind. However, in the broadest sense, sustainable development entails the global, optimal compatibility of economic, environmental and social segments. Once, it was considered that the profitability of organisations, on the one hand, and environmental protection and the interests of the local community, on the other, are entirely divergent concepts. However, it is more than obvious that in modern market conditions, excellent results are being achieved, especially by socially responsible organisations, which indicates a high level of compatibility of all three mentioned segments. Undoubtedly, marketers and managers in such organisations have shown that, in practice, in real turbulent business conditions, high-profit rates can be achieved without endangering human rights and the environment. On the contrary, it is possible to take into account the rights of the employees, consumer satisfaction, community progress, environmental protection, an effective fight against corruption, and many other ethical and environmental principles related to the specific business and functioning of the organisation.

Like most previous works on the ecology and environmental protection, the literature mentioned before focused on consumer goods markets, which is to say, on B2C markets. Numerous articles cover the topic of producers, i.e. factories, which with their technologically obsolete production processes, caused great damage to the immediate and wider environment, polluting air, land or water, and sometimes two or even all three listed natural resources. In addition, the researchers focused on customers and final consumers, exploring their perceptions of various environmental issues related to specific production processes and products. They also focused on sustainable marketing, marketing channels, promotion, consumption and disposal of used products and packaging because they are all segments that pose a potential danger to the immediate environment and the entire ecosystem (Petković & Milovanović, 2019). However, there is significantly less literature and research on B2B marketing. Authors, researchers, marketers and managers have dealt significantly less with environmental issues in business markets (Sharm, Iyer, Mehrotra & Krishnan, 2010). A very interesting paper was published on the topic of sustainable marketing in business (B2B) markets, where it was pointed out that sustainable marketing has been considered unprofitable for years and as an unnecessary

cost because customers in business markets are predominantly rational and as such are not willing to pay a higher price for the component of the sustainability of the supplier's offer. It should be noted that sustainable marketing means practices that insist on environmental responsibility, social responsibility towards all stakeholders, and economic progress. It is also interesting to note that in the business market, a significant part of sustainability is related to efficient management of relations with suppliers and efficient management of resources, which together lead to better organisation, cost reduction and a positive impact on the environment (Sinčić & Ćorić, 2021).

Many researchers believe that environmentally responsible strategies strongly contribute to organisations' competitive advantage and profitability in the markets of final consumption products, where managers' focus is usually on environmentally conscious consumers. However, when it comes to business customers in B2B markets, the situation is somewhat different because business customers in the buying process are not guided by emotions like many final consumers but act as a team and much more rationally. The B2B markets show the exceptional importance of marketing in the green supply chain (green marketing channels) and its significant role in the placement and distribution of environmentally acceptable products. In doing so, particular emphasis is placed on the role of marketing among organisations in the supply chain, where specific environmental sustainability goals are achieved. In this context, the three main strategies are the reduction of excess product supply, reduction of reverse supply and internal marketing, which with their synergy, contribute to achieving the goals of environmental sustainability in business markets (Sharma, Iyer, Mehrotra & Krishnan, 2010).

Many authors dealt with the issue of ecology and environmental protection in the field of B2C marketing. In contrast, the literature on ecology in the B2B marketing segment is scarce. It is indisputable that the sources, the environmental pollutants, are similar or the same in the markets for final consumption goods and the business markets. First of all, producers, i.e. numerous factories with their production processes, but also with the products themselves, packaging, means of transport, and other business activities have a direct negative impact on the immediate environment and a significant indirect impact on the entire ecosystem. There is also an identical or at least very similar negative impact on the environment, which comes from actors from the B2C and B2B markets. Harmful gases or polluted wastewater from the factory have the same negative effect regardless of whether the factory produces chocolates or steel sheets for cars, trucks or excavators. Both markets have the same or very similar pollution sources, and the negative consequences for the entire ecosystem they generate are equally dangerous. Therefore, the key difference

between the final consumption product market and business markets is in customers and the behaviour of consumers in the purchasing process, in their relevant characteristics, purchasing and consumer habits. Undoubtedly, there are many more buyers/consumers of final consumption products, who perform incomparably more purchase transactions daily, which are of smaller financial volume, and they make the purchase decision independently or with less consultation with household members. (Jovičić, 2021). In all this, consumers of final products do not always behave rationally in buying, using and disposing of products or packaging. On the contrary, they often behave emotionally, recklessly, and even irresponsibly. Consumer irresponsibility can be bilateral, ecological and ethical. Ecological refers to harmful impact on the environment, and ethical is manifested through negative impact on the natural environment and relations with other people and entities in the local and/or wider community.

In purchasing and using products, business customers behave significantly differently from customers (consumers) in the markets of final consumption products. Many people, sometimes a whole team of qualified and professional people, usually participate in the purchase process. Several offers are collected and analysed, all relevant parameters are compared, and the final decision is not emotional but extremely rational. This implies that the buying process by business customers is performed more slowly, planned, coordinated and in controlled conditions because, in the company hierarchy, more instances always have a control, corrective role. Having in mind all these facts, which indicate a fairly well-established, transparent and controlled process of purchasing and using products in B2B markets - which significantly reduces the possibility of harmful impacts on the environment, it is not surprising that researchers are less interested in ecology and environmental protection in business markets. However, this certainly does not mean that there are no environmental problems in business markets. On the contrary, there are certainly some. However, they may be less interesting to the public, or information about them is less available. It may be difficult to conduct quality research for some other objective or subjective reasons and effective resolution in practice. Previous research on this topic is scarce, mostly because obtaining relevant, reliable and true information and data from employees involved in business purchases is difficult. Therefore, the present research aims to fill the gap and answer many open questions about ecology and environmental protection in B2B markets. The focus of field research will be on organisations that purchase and install thermotechnical devices. Interviews with their managers, as relevant respondents, will provide credible and usable primary data related to the purchase and installation of representative products in this field, such as gas boilers, heat pumps and air conditioners.

3. RESEARCH METHODOLOGY AND HYPOTHESIS DEVELOPMENT

In order to collect reliable and high-quality data related to broad and very complex issues of ecology and environmental protection in B2B markets, it is necessary to identify competent, professional and relevant individuals and organisations who are active participants in business markets and who in business practices face real, concrete environmental challenges. As there is a very wide range of manufactured goods and a very wide range of organisations that buy them in B2B markets, it was decided that the focus of the research will be gas boilers, air conditioners and heat pumps, as representative business goods, i.e., investors and installers - as relevant and representative organisations, dealing with the purchase and installation, i.e. installation of these devices (Jovičić, 2013). Rarely do investors in construction, residential or commercial, appear as buyers of these devices (gas boilers, air conditioners or heat pumps). In most cases, investors with installers, as subcontractors, agree on the complete purchase and installation (purchase and assembly) of boilers, heat pumps and air conditioning, so installers most often appear as buyers of these devices in business markets.

In this context, the focus of the research will be installers, that is, their managers, persons in charge of procurement, purchase and/or installation of gas boilers, heat pumps and air conditioners in their organisations. These three devices were chosen to be the centre of the research because they are very representative products according to the common classification of production goods into capital goods, production materials and components, and auxiliary products and services. They fall between expensive capital goods with a long expiration time and cheap auxiliary products and services with a short lifespan, relatively often procured through indirect marketing channels, as they are also procured rarely and mainly through direct marketing channels (Jovičić, 2021). In the Vojvodina B2B market, the demand for these products has continuously grown in recent decades. On the other hand, the supply is getting richer. Thanks to rapid advances in science and rapid and intensive technical and technological progress, new, more sophisticated products are constantly emerging, such as boilers that use high energy efficiency condensing technology, climate inverter, etc. Such modern and sophisticated devices provide increased comfort, increased energy efficiency and have a less harmful impact on the ecology and the environment (Vaillant Serbia). In such context, during the field research and conversations with managers from installation organisations, it was noticed that the energy efficiency of these devices is manifested through significantly reduced energy consumption (gas or electricity) and, at the same time, achieving significantly higher thermal/cooling effects. Regarding environmental

protection, special emphasis should be placed on reduced emissions, materials and parts in devices made of recyclable material, reduced noise, and the use of environmentally friendly freon. Unlike conventional refrigerants, environmentally friendly freon does not harm the environment, making it easier to recycle and reuse (Energynet Serbia). In addition, unlike old conventional devices, new sophisticated devices with advanced technology (condensing gas boilers, modern heat pumps or inverter air conditioners) are lighter, more reliable, have a long service life and modern design, enable faster and cheaper service, have smart automatic control and other modern technological solutions. The comfort segment is not negligible. Unlike conventional ones, inverter air conditioners provide extremely quiet operation, reducing indoor noise. UVC sterilisation eliminates viruses, bacteria and other harmful particles and substances in the air, thus providing users with clean and healthy air in air-conditioned rooms (Energynet Serbia). Of course, all the mentioned technical, technological and ecological performances of modern devices indisputably exceed the characteristics of old, conventional ones. However, their price is significantly higher, which still leaves enough space for buyers to have a dilemma, think and compare modern, ecological and conventional devices. It is certain that business customers, in the process of purchasing these devices, carefully compare all their relevant parameters, starting from quality, functionality, energy efficiency, environmental impact, and impact on the safety, comfort and health of users, through design comparison, warranty period, service, all the way to the price, method and deadline of payment. Having in mind only the above-mentioned basic parameters of boilers, pumps and air conditioners, it can be seen that business customers do not have an easy task in making the final purchase decision. However, this complex job is somewhat facilitated by the fact that there are many quality world brands on the Vojvodina business market of thermotechnical devices, which even produce all three (gas boilers, heat pumps, air conditioners) or at least one of these devices. Without intending to favour any of them, among the more famous brands are Bosch, Vaillant, Daikin, LG, Remeha, Gree, Ferroli, Protherm, Samsung, Weishaupt, Viessmann, Panasonic and others.

The fact is that increasingly fierce competition and the struggle for profit in business markets, including the markets of gas boilers, heat pumps and air conditioners, often lead to unfair competition and disrespect for many ethical and environmental issues related to business. The research problem is based on these facts and potentially harmful consequences, which in the future can be solved only by joint, coordinated efforts of all socially responsible organisations within the distribution and marketing channels. Only a joint effort would ensure effective environmental protection and sustainable development of social communities. The research aims to collect relevant and reliable data from

business customers (installers) regarding the impact of environmental components on the placement of gas boilers and air conditioners in order to obtain quality and useful information based on their processing and descriptive statistical analysis which would enable a better understanding of the research problem, confirm or reject research hypotheses, and ultimately, which will facilitate managers in B2B markets to make optimal business decisions regarding the environment and the implementation of green marketing strategies. The results of this research are expected to be useful for all socially responsible organisations in business markets which deal with the procurement, sale and installation of gas boilers, heat pumps and air conditioners. The results will emphasise the need to apply green marketing principles, which would enable them, with the satisfaction of their customers and maximum preservation of ecosystems, to achieve a competitive advantage in a particular B2B market.

The research was conducted on the territory of Vojvodina, primarily in Novi Sad and several other larger cities, such as Subotica, Vršac, Zrenjanin and Sombor. As there are not too many credible installers, it was decided to conduct the research by survey, i.e. by interviewing (direct interviews, face to face) managers/experts. This decision was made because the field of thermotechnics is quite specific and very professional, so credible, qualitative and honest answers can be obtained only through unstructured or semi-structured interviews, which are much more demanding than a structured written or electronic questionnaire and certainly require much more time, knowledge and engagement of examiners (Hair, Wolfinbarger, Oritinav & Bush, 2013). It was also decided to apply a deliberate sample so that the respondents could be contacted promptly and appointments and exact dates for interviews could be scheduled.

Fieldwork, that is, the research which was conducted from the middle of January to the end of February 2022. Descriptive statistical analysis, arithmetic mean, standard deviation and coefficient of variation were used to process the collected data and their tabulation. The results are presented in the next chapter.

In accordance with the set goal of the research, which is focused on obtaining and analysing data related to the impact of environmental components on the placement of gas boilers, heat pumps and air conditioners, preliminary and then defined working hypotheses were formulated in the form of questions: Does marketing enable the realisation of competitive advantage in the Vojvodina B2B market? Are there any restrictions that hinder the more intensive application of green marketing in the Vojvodina B2B market?

Thanks to the first, very meaningful and constructive conversations with the respondents during the personal interview, the working hypotheses were

specified, and the questionnaire statements with Likert five-point scale were reformulated. This contributed to more reliable and precise answers and, thus, a better understanding of this complex issue of green marketing, green marketing channels and so-called green customers/consumers in the Vojvodina B2B market. In this context, both research hypotheses are shaped and presented as statements. The first refers to the importance of environmental awareness in decision-making on the procurement and installation of environmental gas boilers and air conditioners and reads:

H1: High level of environmental awareness significantly influences the decisions of managers of assembly organisations in the Vojvodina B2B market to buy sophisticated ecological gas boilers, heat pumps and air conditioners rather than conventional ones.

The second tests the existence of objective limitations that hinder the more intensive application of green marketing in the purchase of sophisticated ecological thermotechnical devices on the Vojvodina business market and reads:

H2: Objective limitations hinder the wider and more intensive application of green marketing in the Vojvodina B2B market of gas boilers, heat pumps and air conditioners.

Ecological consciousness implies a certain knowledge about ecology and environmental protection, but also a sincere readiness of man to understand nature and live in accordance with it, to be continuously ecologically educated, and to act in accordance with generally accepted ecological values and ecological attitudes. The underestimating and degrading human attitude towards nature and the environment can be changed only by raising environmental awareness among the entire population. The awareness would be raised first among managers and marketers but also among all other potential buyers, consumers or users of products because it is indisputable that man, or the human factor, is the cause of most environmental problems.

4. RESEARCH RESULTS

Conducting field research through an unstructured interview in the B2B market requires much time, energy and knowledge, both in relation to the research process itself, i.e. sampling, selection of research methods, data collection and processing, as well as interpretation of results and sufficient professional expertise and practical knowledge in the field of thermotechnics, in order to understand the professional terminology and correctly interpret the answers of the respondents, which are managers of assembly organisations, who are mainly by vocation mechanical engineers of thermotechnics. We must not lose sight of

the fact that the respondents' decisions to purchase gas boilers, heat pumps and air conditioners is related to their installation, i.e. with their sale or with the sale of residential or commercial spaces with these built-in devices. Already during the ordering or purchase of these devices, the respondents must take into account what they are buying so that in the future, they would not have problems with the sale of real estate in which they are installed. This fact indicates the complexity of the purchasing process in business markets and the great responsibility of business purchase decision-makers. They must consider many elements related to products, from their quality, design, functionality, packaging, warranty period, and service, to their ecological and energy characteristics, all the way to the possible negative and harmful impact on the environment (Jovićić, 2021). This research should be viewed in such a broader context as very complex and demanding, where respondents, who are indisputably technical and commercial experts, perform very complex tasks. They are in charge of procuring these devices, then of their installation and finally, of sales. Therefore, they represent relevant and credible persons for this form of research.

Table 1. shows the respondents' answers, ranging from one to five, regarding the motives for the purchase and installation of environmentally friendly gas boilers, heat pumps and air conditioners (1 - I do not agree, 2 - I disagree, 3 - I have no opinion, 4 - I agree, 5 - I completely agree). Their answers were not short because the questions were not dichotomous. On the contrary, the answers were meaningful, multi-layered, with comments and had a broader context. In the end, they were sublimated into grades from one to five, based on which the arithmetic mean was calculated, standard deviation and coefficient of variation. The following conclusions were reached on the basis of such tabulated and reviewed data. Convincingly the highest score, an average of 4.66, or the highest degree of agreement, respondents said that the high level of compliance with environmental standards of sophisticated environmental devices is the key to determining the reason for their decision to purchase and install modern environmental and not conventional products/devices. In the second place, with a very high average score of 4.13, is the commitment of the procurement manager to ecology and environmental protection. Behind it is the statement that it is easier to sell residential and commercial buildings with ecological gas boilers, heat pumps and air conditioners.

Table 1

Motives for the purchase and installation of ecological gas boilers, heat pumps and air conditioners (results of arithmetic means for the utilised statements)

Examinee	Conclusions				
	The commitment of procurement managers to ecology and environmental protection	The higher energy efficiency of ecological than conventional thermo technical devices	Higher prices for ecological than conventional devices	Easier sale of residential and commercial buildings with built-in ecological gas boilers, heat pumps and air conditioners	High level of fulfilment of ecological standards of sophisticated ecological devices
1.	4	3	1	3	5
2.	4	4	1	4	5
3.	5	3	2	4	5
4.	4	3	1	3	4
5.	3	3	1	4	4
6.	4	3	1	4	5
7.	5	4	2	5	5
8.	4	3	1	3	4
9.	4	3	1	4	4
10.	4	4	1	5	5
11.	4	3	1	4	5
12.	5	5	2	5	5
13.	4	3	1	4	5
14.	4	4	2	4	5
15.	4	3	1	3	4
Total	62	51	19	59	70
Average grade	4,13	3,40	1,26	3,93	4,66

Note. Authors review. (results of field research on the Vojvodina B2B market of thermotechnical devices in the period January-February 2022).

In the penultimate place, with an average rating of 3.40, is the higher energy efficiency of organic than conventional products, while in the last position of all offered statements, with the lowest level of agreement - higher prices of organic than conventional products, with an average rating of only 1.26, which means that this statement is not a motive for buying, but on the other hand very clearly indicates the full acceptance, by respondents, of the fact that organic products,

at this stage of socio-economic development, must be more expensive than conventional.

The presented results of arithmetic means are absolutely confirmed by small values of standard deviations and coefficients of variation, which can be seen in Table 2. Such low values of standard deviations and coefficients of variation indisputably indicate high representativeness of arithmetic means, and thus a high level of examinees to agree with the conclusion that: high fulfilment of ecological standards of sophisticated ecological thermotechnical devices, as well as the commitment of procurement managers to ecology and environmental protection, are significant motives for the purchase and installation of ecological gas boilers, heat pumps and air conditioners.

Table 2

Motives for the purchase and installation of environmentally friendly gas boilers, heat pumps and air conditioners (results of standard deviations and coefficients of variation for the statements used)

Nr.	**Conclusions**	**AS**	**SD**	**KV**	**KV %**
1.	The commitment of procurement managers to ecology and environmental protection	4,13	0,4989	0,1208	12,08
2.	The higher energy efficiency of ecological than conventional thermo technical devices	3,40	0,6109	0,1796	17,96
3.	Higher prices for environmentally friendly than conventional devices	1,26	0,4423	0,3510	35,10
4.	Easier sale of residential and commercial buildings with ecological gas boilers, heat pumps and air conditioners	3,93	0,6799	0,1730	17,30
5.	High level of fulfilment of ecological standards of sophisticated ecological devices	4,66	0,4715	0,1012	10,12

Note. Authors review. (results of field research on the Vojvodina B2B market of thermotechnical devices in the period January-February 2022).

Based on the above, it can be stated that the first hypothesis has been confirmed. It can be argued with high probability that the high level of environmental awareness significantly influences the purchase decision of the managers in the Vojvodina business market to buy more sophisticated heat pumps and air conditioners instead of conventional ones.

The second hypothesis was also tested using statements with the five-point Likert scale. The question was - are there objective limitations that hinder the wider and more intensive application of green marketing in the Vojvodina business market of gas boilers, heat pumps and air conditioners? Tabulated numerical answers to these questions are shown in Table 3. It can be seen that

respondents expressed the highest agreement, with an average score of 4.60, stating that insufficient state support for the purchase of organic products is one of the key constraints for more intensive use of green marketing in the Vojvodina market of thermotechnical devices. In the second position, with an average score of 4.33, there is insufficient information on potential buyers and public opinion about the benefits of new, sophisticated environmental products. In third and fourth place are the underdeveloped demand for organic products and the low level of environmental awareness among most business market participants. While convincingly in the last position is the insufficient interest of marketing channels for the placement of ecological products, with an average score of only 2.40. Such a low average rating does not mean that marketing channels, i.e. members of the channel - intermediaries, are not interested in placing technologically sophisticated environmental thermotechnical devices. On the contrary, they want to sell as many as possible but keep selling conventional ones. So, at the same time, they offer the conventional ones, leaving it up to customers to make the final purchasing decisions themselves, depending on their needs, desires, preferences and, of course, financial capabilities. Marketing channels try to offer customers the widest range of these products and not directly influence their purchasing decisions. However, there has been a noticeable trend in recent years where more and more channel members are rapidly adopting environmental principles in their businesses. Green marketing channels in B2B markets are created more often, which indirectly, sophisticatedly and strongly direct customers in the business market towards purchasing more expensive but much more functional, aesthetic and energy-efficient thermotechnical products. So, in the current business conditions, we have an interesting situation on the Vojvodina B2B market. These sophisticated products made of ecological materials and produced in ecological production processes are increasingly transported to their customers by ecological, energy-efficient means of transport, which minimally pollute the environment. Also, they are stored in energy-efficient storage facilities and packed in environmentally friendly, recyclable packaging.

It is indisputable that these activities increase the production, storage and distribution costs of ecologic products. However, it is also indisputable that environmental awareness and the number of modern and well-informed business customers are constantly growing. So, from year to year, the segment of so-called green customers/consumers, willing to pay a slightly higher price for organic products, actively contribute to the preservation and protection of the environment.

Table 3

Limitations that hinder the wider and more intensive application of green marketing in the Vojvodina business market of gas boilers, heat pumps and air conditioners (results of arithmetic means for the statements which were used)

Examinees	Conclusions				
	Insufficiently developed demand for ecologic products	The insufficient interest of marketing channels for the sale of ecological products	Insufficient information about potential buyers and public opinion about the advantages of ecological products	Low level of environmental awareness among most business market participants	Insufficient state support for the purchase of ecological products
1.	4	2	5	3	5
2.	4	3	4	3	4
3.	4	2	4	4	4
4.	4	2	5	3	5
5.	5	3	5	3	5
6.	4	2	4	4	5
7.	4	2	4	3	4
8.	4	2	4	3	4
9.	4	3	4	3	4
10.	5	3	4	4	5
11.	4	2	5	4	5
12.	4	3	5	3	5
13.	4	2	4	3	4
14.	3	2	4	3	5
15.	4	3	4	3	5
Total	61	36	65	49	69
Average grade	4,07	2,40	4,33	3,27	4,60

Note. Review of the author (results of field research on the Vojvodina B2B market of thermotechnical devices in the period January-February 2022).

Based on the results shown in Table 4, which contains the above-average estimates, but also data on standard deviations and coefficients of variation, it can be concluded that the second hypothesis has been confirmed. The field research has confirmed the existence of objective limitations which make a wider and more intensive application of green marketing in the Vojvodina B2B market of gas boilers, heat pumps and air conditioners more difficult. Based on the obtained results, it can be seen that the key limitations are: insufficient state

support for the purchase of ecological products, then insufficiently informed potential buyers and public opinion on the advantages of new, sophisticated ecological thermotechnical devices, as well as insufficiently developed demand.

Table 4

Limitations that hinder the wider and more intensive application of green marketing in the Vojvodina business market of gas boilers, heat pumps and air conditioners (results of standard deviations and coefficients of variation for the statements used)

Nr.	Conclusions	AS	SD	KV	KV %
1.	Insufficiently developed demand for ecologic products	4,07	0,4422	0,1086	10,86
2.	The insufficient interest of marketing channels for the sale of ecological products	2,40	0,4899	0,2041	20,41
3.	Insufficient information about potential buyers and public opinion about the advantages of ecological products	4,33	0,4714	0,1089	10,89
4.	Low level of environmental awareness among most business market participants	3,27	0,4422	0,1352	13,52
5.	Insufficient state support for the purchase of ecological products	4,60	0,4899	0,1065	10,65

Note. Review of the author (results of field research on the Vojvodina B2B market of thermotechnical devices in the period January-February 2022).

It can also be seen in the tables that the obtained arithmetic means of the key constraints are confirmed by the small values of their standard deviations and the small percentages of their coefficients of variation. Small values of standard deviations indicate the compression of values around arithmetic means, which means their representativeness is higher. On the other hand, small percentages of coefficients of variation for all three key findings confirm low variability, and higher compression around the average, indicating the high representativeness of the obtained arithmetic means.

5. CONCLUSION

The results of the conducted research, which are based on data obtained through sophisticated unstructured personal interviews, show that both research hypotheses have been confirmed. The respondents' answers indicate that applying environmental marketing, in the context of socially responsible business, in Vojvodina's B2B market allows organisations to gain a competitive advantage and good position in the minds of modern, sophisticated industrial customers, especially in the segment of so-called green customers.

The research results are likely to inspire and encourage managers' work in the Vojvodina B2B market, regardless of whether they are engaged in production, mediation or installation (installation of thermotechnical equipment). In addition to the growing importance of environmental issues in the spheres of production, promotion and distribution, there is an intensified growth of customer awareness (behaviour of green consumers) about the procurement of environmental, healthy and quality products and services, as well as awareness of the need to protect and improve the environment. All of the above undoubtedly contributes to a higher level of social responsibility on both the supply and demand side of business markets, which will ultimately result in a more profitable business and greater customer satisfaction and a better environment and healthier and more humane life on planet Earth. Confirmed research hypotheses are a good recommendation to all Vojvodina B2B market players. They must accept and implement the green marketing concept if they want to achieve socially responsible and profitable business, which are compatible and not exclusive categories. It is indisputable that all socially responsible organisations in marketing channels in business markets prefer cooperating with companies that care about ecology and environmental protection.

Based on the obtained results, it can also be concluded that there is currently a solid demand for ecological thermotechnical products in the Vojvodina B2B market. However, if they want to increase the sale of ecological, sophisticated, but more expensive products, all marketing channel members must continually work hard on stimulation and growth of demand. They should create and increase the efficiency of green marketing channels and promote organic products to timely, fully and accurately inform potential customers. They should point out all the functional and qualitative benefits of organic products and all the benefits they provide in the context of environmental protection and preservation.

Although unstructured interviewing has numerous advantages, such as personal contact, a wide range of topics, content and multi-layer answers, and dynamic, direct communication with professional and competent respondents, it also has certain limitations. These are primarily related to a relatively small sample of respondents and territorial limitations because the research covered only the territory of the province of Vojvodina. Therefore, future research on green marketing, green marketing channels and green customers/consumers in B2B markets should include a larger, more representative sample of respondents and be conducted throughout the Republic of Serbia. Additionally, in order to get a more realistic picture of the functioning of green marketing channels and the level of satisfaction they can provide to environmentally conscious (green)

customers, it would be good to organise visits to individual members of channels or visits to investment facilities where companies install gas boilers, heat pumps and/or air conditioners. Certainly, the direct physical presence of examiners in real conditions of functioning of marketing channels would enable researchers to complete information and even better insight into the problems of green marketing channels and the behaviour of environmentally conscious customers in the process of buying thermotechnical products on the Vojvodina B2B market.

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