SELECTED ASPECTS OF THE MARKETING OF BUS TRANSPORT COMPANIES DURING COVID-19

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Abstract. The COVID-19 pandemic has caused a significant worldwide decrease in the number of passengers using bus transport in recent years. This phenomenon was caused by travelers' fears of this disease, and at the same time, people started working from home. The aim of the paper is to analyze the importance of marketing and marketing strategies for bus companies. From our point of view, marketing is a tool for making bus transport more attractive for passengers. For the purposes of this post, we focus on customer perceptions of marketing and marketing strategies. We found that customers prefer Internet advertising the most, and the second most preferred type of advertising is print advertising. Their proposals in the subject area are also based on other findings that we dealt with in the survey. We investigated the motivation of passengers to use public transport, their opinion about the transport company in the Zilina region, and whether they use modern tools such as e-shops, virtual cards, and similar. As part of the papers processing, we used the questionnaire survey method, conducted a statistical evaluation of established hypotheses, and conducted a structured interview with the management of the bus company. From our point of view, it is marketing based on managerial experience and customer preferences that can be beneficial for the overall attractiveness of bus transport and, at the same time, significantly contribute to increasing the competitiveness of these businesses.

Keywords: marketing, management, marketing strategies, the bus transport companies, costumer's preferences.

JEL Classification: M30, M31, M39.

Introduction

In today's world, marketing is all around us. Whether on social networks or on the streets, an enormous amount of information about the offered products and services reaches us from everywhere. From the customer's point of view, this is largely a win-win situation. Because if he is interested in something, then in most cases there are many sources from which he can obtain the desired product or service, and he can even choose from different variants offered by several companies (Lawrie & Cobbold, 2004). However, on the flip side of this, there are businesses that, if they want to thrive and succeed in today's markets, must provide customers with the value they demand. In the article, we will try to point out the necessity of marketing strategies for bus transportation companies. Marketing strategy represents a longterm prospective approach and a comprehensive, unified plan, the goal of which is to achieve a sustainable competitive advantage. And by comprehending the needs and desires

of customers. Currently, people strongly prefer individual transport over public mass passenger transport. Individual transportation is perceived as a manifestation of personal prestige and freedom (Heinberg et al., 2018; Lyakina et al., 2019). However, its disproportionate increase, which has been recorded in recent years, represents a great burden on the road infrastructure and also has a negative impact on the environment. In order to retain passengers and attract new ones, bus companies must offer reliable, safe, and high-quality services that match the benefits that people derive from using private cars (Harris, 2022; Ali et al., 2022). We consider high-quality bus transport to be a very important aspect of modern urban transport. In order for people to start using bus transport more, there must be a quality offering of services. We see the phenomenon in public mass transport mainly in the fact that this type of transport can be the most efficient in terms of its capacity. If people started to use mass public transport to a greater extent, the number of passenger cars would be reduced, which also contributed to the reduction as well as

the effects on the environment. The purpose of the paper is to find out the preferences of bus transport customers, which could contribute to uncovering the barriers due to which people use bus public transport to a lesser extent. At the same time, based on the findings, we propose possible recommendations for the bus company that could increase the attractiveness of this form of transport.

1. Theoretical background

Marketing is associated with a vast and wide set of different human activities, which condition a large number of its definitions, which are formulated from different practical and scientific points of view (Bazaras et al., 2022; Ferrell & Hartline, 2011).

People are the sum of their wants and needs, according to the deep roots of marketing. It is these that cause feelings of dissatisfaction in people. And feelings are directed towards trying to solve this problem by acquiring what can satisfy these wants and needs. Marketing deals with identifying and fulfilling social and human needs. It is a social process by which groups and individuals obtain what they want and need. And in this process, products and services of value are created, offered, and freely exchanged. Marketing seeks more (more customers, more market share, more work) and is driven by improvement (better results, better service, better community). It is a decisive part of the creation and subsequent implementation of the corporate strategy, which leads to the fulfillment of goals. Marketing is based on the relationships a business has with customers (Borysova et al., 2021; Evans et al., 2009; Odeck & Hoyem, 2021).

Concepts such as marketing strategy and the creation of an adequate marketing mix are primarily associated with marketing. The tool used by the company to achieve its goals is strategy. It defines the company's long-term goals, selects procedures for fulfilling these goals, and allocates resources to achieve these defined goals (Chen et al., 2021; Feng, 2022; Fumagalli et al., 2021). The concept of strategy is also associated with the concept of tactics, which is the choice of partial, temporally, and spatially limited procedures in a given situation. In order for a business to be competitive these days, it is necessary to have an effective marketing campaign. However, many authors point out that the effectiveness of marketing is currently on a downward trend. Businesses currently invest a lot of money in marketing campaigns, and if their return is insufficient, it causes the businesses to be less competitive. One of the main reasons why the performance of marketing campaigns decreases is the incorrect use of media, their poor strategic planning, the insufficient amount of use of traditional media, and increased investments in digital media, which, however, have an impact on the achievement of short-term goals (Rajnoha & Lorinzova, 2015; Gajanova et al., 2020; Gajdosikova et al., 2022; Hasan et al., 2022).

According to several authors, the main reasons for the decline in the performance of marketing campaigns are primarily poor media planning and too high investments in digital media (Gajanova et al., 2020; Gkiotsalitis & Cats, 2021; Kurram & Attaullah, 2012). Binet and Field (2009) were the first to draw attention to it; later, other authors also addressed this issue. While the profitability of marketing campaigns in-creased in the early years, it has decreased over the last 10 years. In this case, the effective-ness indicator is various factors: profit, sales, market share, penetration, loyalty, and price sensitivity (Behun et al., 2018; Binet & Facchini, 2015; Michalkova & Kliestik, 2019; Richterova et al., 2021). When choosing the right media mix for a marketing campaign, marketers should consider the following factors: the number of people who will see the ad or how many the ad will be shown to; the ability to target or reach a specific audience; the total cost of producing and purchasing the ad; the number of ad impressions; the ability to immediately activate sales; the ability to reach potentially the entire market; the environment. The marketing of bus transportation companies can be described as service marketing. It is the process of perceiving, understanding, stimulating, and satisfying the needs of specific target markets while utilizing corporate resources, which deals with the dynamic relationships between corporate products and services, customer needs and demands, and competitor activity. The difference between product marketing and service marketing is that while product marketing is about tangible goods that are physical, service marketing is about services. And those are intangibles (Kliestik et al., 2020; Makienko & Rixom, 2022).

Services are a type of good that people consume to ensure their survival and to create the conditions for their future development. Public mass passenger transport is a service to the population. Its main task is to satisfy the daily needs of the population for transportation, whether it is a trip to school, work, medical facilities, or the office (Kliestik et al., 2022; Poliak et al., 2017; Tardivo et al., 2021).

According to the authors of Alomari et al. (2023), currently, public transport is the best option through which social and economic sustainability are possible. Shimomura et al. (2014) also dealt with the issue of the development of services in the public interest. They managed to design a method by which they summarized all customer requirements and divided them into groups based on similarity. if, according to them, the public service can be designed for customers in a better classification. They explain that ultimately, this means customer dissatisfaction with services. Gorzelanczyk (2021) sees public mass transportation as a means of satisfying the mobility needs of a large number of people. According to him, this requires specific management methods that can improve the quality of life.

Public transport is provided by bus transport, rail transport, air transport, water transport, taxis, and others. Public passenger transportation, how it is organized and used, and the options for preference and integration are frequently covered in the media. In connection with it, we talk about road, railway, water, air, and other systems of public passenger transport. Handling and information

systems, tariff systems, and much more are also important. From a global perspective, it can be concluded that one of the basic problems of today is the unfavorable development of the division of transportation work in favor of road transport. However, it is not a matter of preference for bus transport but mainly for individual (non-public) transport. In connection with this preference for individual car transport, we can talk about a significant burden on the road infrastructure and, last but not least, on the environment (Leber et al., 2018; Lizbetinova & Hitka, 2016; Stacho et al., 2022). It also brings many other problems. Of their number, the increase in traffic noise, the reduction in road traffic safety, global warming, and the like are often mentioned. In addition, the increase in individual car traffic also causes a decrease in travel speed in cities; traffic jams arise that prevent the availability of destinations, especially those in the city center; it causes irregular public transport operations; and the like (Konecny et al., 2021).

In the Slovak Republic, owning and using one's own expensive vehicles is a matter of certain social status, while in Western and Northern European countries, the trend is not to own a car. It becomes unnecessary for them due to the availability and quality of public transport (Pakurar et al., 2019; Poliak et al., 2020). Currently, trends in transport reflect not only the level of technology but also social changes that are related to more intensive efforts to protect the environment (Poliak et al., 2017). The global impact of the COVID-19 pandemic has been responsible for a significant decline in public transportation ridership (Warnock-Smith et al., 2021). Before the outbreak of the COVID-19 pandemic, it was estimated that passenger transport around the world would increase by approximately 40% between 2010 and 2050 (Tardivo et al., 2021). However, due to COVID-19, individual passenger and public passenger transport within all EU countries was partially or completely closed. In the field of bus transport, significant decreases were recorded worldwide. During the pandemic, key border crossings for passenger traffic were closed. According to Tardivo et al. (2021), this created restrictions for long-distance bus transport. However, they were also recorded in suburban and urban traffic. Part of the passengers may be discouraged from traveling by public transport due to their concerns about whether using public transport is safe in the current situation (Mura et al., 2016; Pakurar et al., 2019; Settey & Gnap, 2020). Several authors agree that the pandemic related to the COVID-19 disease had a significant impact on public transport systems worldwide. The number of passengers on public transport has decreased drastically, partly due to people's fear of crowded spaces and also because more people have started working from home (Adler et al., 2021; Bubalo et al., 2022; Clark & Mathisen, 2020; Shortall et al., 2022). In the current period, measures within the framework of travel in the case of public mass transport under the conditions of the Slovak Republic are cancelled. This has been the case since February 28, 2022, when the measures taken during the COVID-19 pandemic began to be largely relaxed and the government declared that no more measures related to the pandemic would be taken. Despite this fact, we believe that the COVID-19 pandemic and the measures that were taken at the time of its outbreak also have an impact on the current state of public bus transport in Slovakia. Many people used personal transportation during the pandemic and have adopted this convenience until today. Among the foreign authors, the effects of the pandemic on travel behavior were investigated by Javadinasr et al. (2022), who sought to reveal changes and new patterns of passenger behavior in public transportation in the USA. They also examined their current requirements and preferences at the time. The authors, Dashdamirov et al. (2022), investigated passenger satisfaction levels by gender and age. Authors Taniguchi and Fujii (2007) investigated the promotion of bus companies through various advertising elements. According to them, with the help of communication, there has been a positive change in the use of bus transport. The mentioned authors came to the conclusion that the marketing activities of transport companies cause an increase in the use of this type of transport by passengers.

Esmailpour et al. (2022) focused their research on passenger satisfaction with the quality of transport services and their degree of loyalty to public transport.

Authors Nastisin et al. (2022) conducted an analysis focused on the perception of public transport by customers. They reveal that overall customer satisfaction depends on the quality of transportation services.

However, the transport strategy of the European Union is to support public mass transport. By using public passenger transport, all the objectives of the European Union's strategy in the fields of road safety and ecology are fulfilled. These are the main reasons for choosing and focusing on the topic of this post.

2. Research objective, methodology and data

The purpose of this paper is to analyze the importance of marketing and marketing strategies in bus transportation companies as seen by a customer who uses bus transportation in the Zilina Region. Through a questionnaire survey, we will investigate respondents' awareness of marketing activities and their preferences for forms of advertising. We will also focus on the customer's requirements and preferences for bus transport. In the Zilina Region, a number of bus transportation companies currently provide personal public mass transportation. These are two large enterprises specialized exclusively in urban public passenger transport, and another 87 bus transport enterprises provide services in the field of bus transport (status was updated on December 31, 2021). The questionnaire survey took place from February 26, 2022, to April 13, 2022. Respondents could fill out the electronic questionnaire via Google Forms or on paper. A total of 399 respondents filled out the survey. The respondents were mostly from the Zilina region. We determined the market size calculation according to the relationship. The formula was used

to determine the minimum sample size for the questionnaire survey (Konecny et al., 2021):

$$n = \frac{Z^2 \times p \times (1-p)}{c^2}, \tag{1}$$

where: n – is the required sample size; Z – is the population size; c – is the allowable margin of error in percent (in our case, 5%); p – is the variance in percent (we substituted 95%).

For this survey, we chose a standard value of 95%. By calculation, we found that the required minimum sample is 385 respondents. We entered the population based on the status of the permanently resident population in the Zilina Region as of January 1, 2021, which represents 691,613 people. Considering the set minimum sample, we consider the sample of 399 respondents to be sufficient and the results to be relevant.

The questionnaire was completed electronically, via Google Forms, and also on paper. The questionnaire consisted of a total of 50 questions. For the purposes of this contribution, only questions whose answers we consider relevant to the issue will be evaluated. We have evaluated each of these questions. By analyzing existing surveys, we found that choosing the right media for a marketing campaign is important from several points of view (Michalkova & Kliestik, 2019; Richterova et al., 2021). Although sufficient attention is usually paid to this issue, from the point of view of the management of public mass transport enterprises, no literature is available devoted to this issue. This fact was also confirmed by a structured interview with the manager of the bus transportation company. According to him, finding out customers' preferences for a specific form of advertising would be an important finding for their company. He thus confirmed the importance of the choice of medium, which is also pointed out by the aforementioned marketing surveys. Many authors indicate Internet advertising as the most preferred form of advertising, followed by other forms of advertising such as TV advertising, radio advertising, cinema advertising, print advertising, and others (Behun et al., 2018; Binet & Field, 2009; Richterova et al., 2021).

Based on this assumption, the main hypothesis was established. For the main hypothesis, we also set up subhypotheses. We also analyzed in more detail the statistical dependence between the age and gender of the respondents and their preference for advertising. It is important for public transportation companies to reach their customers with advertising aimed at their preferences in a way that suits them. Based on the results, we proposed measures for the management of bus transport companies. These proposals are formulated in a general way so that they can be used by any carrier operating in the field of bus transport. We present the wording of the research hypotheses below.

We established the main hypothesis as the following assumption:

Hypothesis H1: Currently, Internet advertising dominates among respondents over other forms of advertising.

For the main hypothesis, we established a null hypothesis as follows:

Hypothesis H1-0: Currently, the Internet form of advertising does not dominate other forms of advertising among respondents. We verified the main hypothesis with a binomial test. Subsequently, for the deeper findings of our research, we established six partial hypotheses. For each partial hypothesis, we determined its null version. The wording of these hypotheses is as follows:

Partial hypothesis H1: Internet advertising is more preferred than radio advertising.

Partial hypothesis H1-0: Internet advertising is not more preferred compared to radio advertising.

Partial hypothesis H2: Internet advertising is more preferred compared to TV advertising.

Partial hypothesis H2-0: Internet advertising is not more preferred compared to TV advertising.

Partial hypothesis H3: Internet advertising is more preferred compared to advertising in any form.

Partial hypothesis H3-0: Internet advertising is not more preferred compared to other forms of advertising.

Partial hypothesis H4: Internet advertising is more preferred compared to print advertising.

Partial hypothesis H4-0: Internet advertising is not preferred over print advertising.

Partial hypothesis H5: The age of the respondents has an influence on the type of advertising they prefer the most.

Partial hypothesis H5-0: The age of the respondents has no influence on which type of advertising they prefer the most.

Partial hypothesis H6: The gender of the respondents affects the choice of advertisement.

Partial hypothesis H6-0: The gender of the respondents has no influence on which type of advertising they prefer the most.

2.1. Definition of research methods

In order to verify the research hypotheses, the statistical program IBM SPSS Statistics was used. As part of the verification of the research hypotheses, the following methods were specifically used:

Pearson's Chi-Square test: we used it in the cross-tabulation analysis. Through this test, we determined whether there is a dependency between the selected categorical variables. The formula for the Chi-Square test is as follows:

$$\chi^2 = \sum_{i=1}^{c} \frac{(O_i - E_i)^2}{E_i}, \tag{2}$$

where: χ^2 – Chi-Square test; c – number of columns; O_i – observed number in a given cell; E_i – expected number; whereas:

$$E_i = p_i \times n, \qquad (3)$$

where: n – total number from all cells; p_i – theoretical expected probability in a given cell.

Cramer's V: this is a contingency coefficient, on the basis of which we can measure the strength of dependence of two categorical variables. If we want to find out if two categorical variables are dependent, we must first perform a test of independence, the Chi-Square test (also referred to as Chi-square or χ^2). The statistical significance of the determined contingency coefficient then depends on the p-value. The p-value represents the significance test designation. In the Chi-Square test, we also work with the α indicator, which represents the level of significance. It is true that if the p-value is close to 0, it means that there is a relationship between the investigated variables. As for the test result, we interpret it as follows:

- if the test result ranges from 0 to 0.3 – there is a weak dependence between the studied variables;
- if the test result ranges from 0.3 to 0.8 – there is a moderately strong dependence between the variables;
- if the test result ranges from 0.8 to 1 – then there is a strong dependence between the variables.

If $p \leq \alpha$, then we reject the null hypothesis because the lower the p-value, the less acceptable the null hypothesis. The formula for calculating Cramer's V is as follows:

$$\phi_c = \sqrt{\frac{\chi^2}{N(k-1)}}, \qquad (4)$$

where: ϕ_c – Cramer's V (phi); χ^2 – Chi-Square test; N – the size of the tested sample; k – the smallest frequency of each categorical variable.

Binomial test: this is a one-sample test that is used to assess whether an observed proportion derived from a single random sample differs from the expected parametric proportion and is also referred to as a test of agreement of the proportion of the trait at a predetermined constant. In this test, we work with two categories while we find out whether the share of measurements in the case of one of the selected categories will be equal to the constant that we set in advance. The formula for the binomial test is as follows:

$$P(x) = \binom{n}{x} p^x q^{n-x} = \frac{n!}{(n-x)!x!} p^x q^{n-x}, \qquad (5)$$

where: n – number of attempts (or number of samples); x – required number of successes; p – probability of success in one attempt; q – probability of failure, or failure in one attempt.

3. Research results

As part of the questionnaire survey, we investigated several aspects related to the marketing area of public transport companies. The results of this investigation and their graphic evaluation are presented in the following part of the post. In one of the questionnaire survey questions, we discovered where respondents learn about bus transportation news and updates. Respondents had the opportunity to choose several answers. The majority of respondents learn about current events and news from bus advertisements. 169 respondents marked this answer. As many as 149 respondents prefer the website of a particular company. To a large extent, the company's Facebook page is also a source of news and updates for the respondents. Six respondents chose the other option. We summarized these answers into four groups: email – 1 respondent; SMS messages – 1 respondent; from various sources – 2 respondents and none – 1 respondent. The findings are presented in Figure 1.
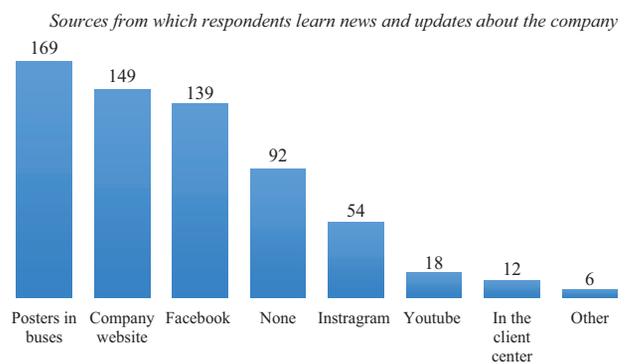

Figure 1. Sources from which respondents learn news and updates about the company (source: own research)

The respondents expressed their perceptions of the largest carrier in the Zilina region on a scale of 1–5, where 1 means very negative and 5 means very positive. Most respondents, specifically 181, chose the rating number 3. 123 respondents perceive the company's marketing activities positively, and 41 people perceive them very positively. On the other hand, seven respondents view the largest carrier in the Zilina region's marketing activities as extremely negative. It is shown graphically in Figure 2.
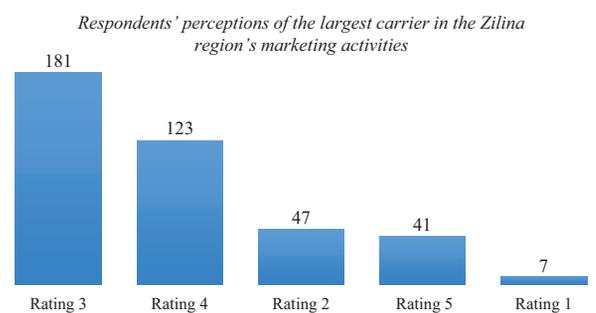

Figure 2. Respondents' perceptions of the largest carrier in the Zilina region's marketing activities (source: own research)

The following question was formulated in order to find out which form of advertising the respondents preferred the most. As can be seen from the Figure 3 respondents mostly prefer internet advertising. One hundred and

seventy-eight respondents chose this option, which represents 44.6% of all. Ninety-one respondents prefer the option of advertising in any form. There are 47 respondents who do not prefer any advertising: 44 prefer print advertising, 30 prefer TV advertising, and 9 prefer radio advertising. Nobody chose a different option.

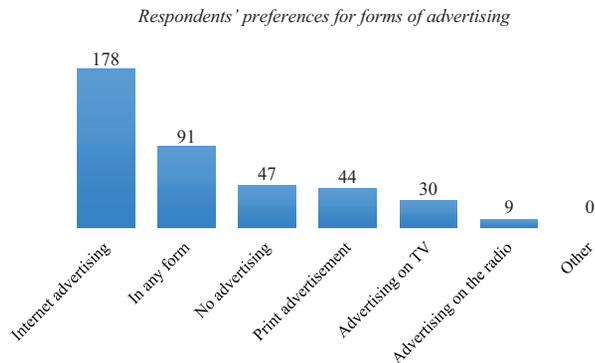*Respondents' preferences for forms of advertising*

Figure 3. Respondents' preferences for forms of advertising
(source: own research)

The goal of the next question of the questionnaire survey was to find out what would motivate the respondents to use, or make more frequent use of, the company's services. They could choose multiple answers. We learned that they would be most motivated by a greater number of connections in the timetable. A strong motivation for them would also be speeding up the smoothness of bus transport and full and exact observance of the timetable. According to thirty-three respondents, nothing needs to be improved. Twenty-two respondents chose the other option. The results are captured in Figure 4.

We summarized the answers for the other option into nine groups: nothing, be-cause I do not want to use the services of this company – 6 respondents; more favorable fares – 5 respondents; nothing, because I prefer to walk – 2 respondents; connection to trains – 2 respondents; more pleasant drivers – 2 respondents; greater comfort in the bus – 2 respondents; quick provision of a replacement vehicle if necessary – 1 respondent; feeling of cleanliness in the bus – 1 respondent; if it were more efficient than a passenger car – 1 respondent.
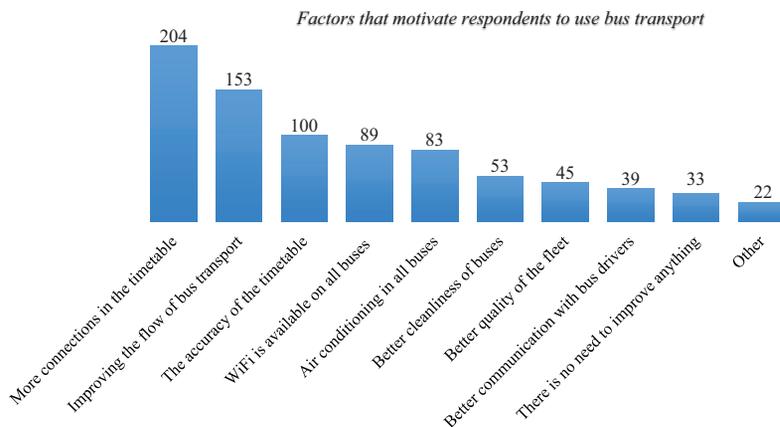
In the questionnaire, we asked the respondents whether they had heard of and used the virtual transport card, the e-shop, and the possibility to travel with the card of the largest bus transport in the Zilina region. In this case, the customer can get a 5–20% discount on purchases at selected stores for every 10 rides. In the questionnaire, we devoted up to three questions to this element. When evaluating them in all three cases, the possibility prevailed that the respondents had not heard about it. In addition, there are also people who have already heard about it but still do not use it. For the virtual transport card, respondents agreed with the options that they did not know how to get it or how to use it. In the case of the e-shop, many respondents expressed that they did not know how to use it or what exactly it was for. In the case of discounts for traveling with a card, some also commented on the fact that they could not claim the discount.

For the purposes of the research, you established several hypotheses through which we determined the preferences of the selected communication tool in the case of public transport companies. We established the main research hypothesis and its null version as follows:

Main hypothesis H1: Currently, Internet advertising dominates among respondents over other forms of advertising.

Main hypothesis H1-0: Currently, the Internet form of advertising does not dominate among respondents over other forms of advertising.

We tested the stated hypothesis by means of a binomial test with a specified proportionality of 51% as a sign of dominance within the tested components. In the binomial test, we tested two groups of answers from respondents. The first group represents a preference for Internet advertising, and the second group is represented by answers from respondents who prefer another type of advertising. As part of the research, the respondents were also offered the option of saying that advertising has no meaning for them. We recorded 47 of these answers. From the total number of answers from respondents (399), we excluded these 47 answers, and thus 352 relevant answers from respondents entered the testing. The Table 1 shows the result of the binomial test of main hypothesis.

Factors that motivate respondents to use bus transport

Figure 4. Factors that motivate respondents to use bus transport (source: own research)

Table 1. Binomial test, main hypothesis 1
(source: own research)

Binomial Test						
		Category	N	Observed Prop.	Test Prop.	Exact Sig. (1-tailed)
Preferences between forms of advertising	Group 1	Internet advertising	178	0.51	0.51	0.457[a]
	Group 2	Other forms of advertising	174	0.49		
	Total		352	1.00		

Note: [a] Alternative hypothesis states that the proportion of cases in the first group < .51.

According to the p-value of the binomial test, which is 0.457 and is greater than the established level of significance $\alpha = 0.05$, we reject the alternative hypothesis and accept the null hypothesis, as the binomial test indicates that Internet advertising does not currently dominate among respondents over other forms of advertising. This result indicates the mutual balance of the tested groups.

Given that the second tested group is represented by other forms of advertising, we approach the testing of partial hypotheses specifically within individual advertising groups. We will test the determined sub-hypotheses with a binomial test.

Partial hypothesis H1: Internet advertising is more preferred than radio advertising.

Partial hypothesis H1-0: Internet advertising is not more preferred compared to radio advertising.

Table 2. Binomial test, partial hypothesis 1
(source: own research)

Binomial Test						
		Category	N	Observed Prop.	Test Prop.	Exact Sig. (1-tailed)
Preferences between forms of advertising	Group 1	Internet advertising	178	0.95	0.51	0,000
	Group 2	Advertising on the radio	9	0.05		
	Total		187	1.00		

According to the p-value of the binomial test in the Table 2 which is lower than the established level of significance $\alpha = 0.05$, we reject the null hypothesis and accept the partial alternative hypothesis H1, as it is confirmed that in the comparison of preferences between Internet

advertising and radio advertising, Internet advertising dominates. Up to 95% of respondents said that they prefer Internet advertising to radio advertising.

Partial hypothesis 2: Internet advertising is more preferred compared to TV advertising.

Partial hypothesis 2-0: Internet advertising is not more preferred compared to TV advertising.

The Table 3 shows the result of the tested partial hypothesis.

Table 3. Binomial test, partial hypothesis 2
(source: own research)

Binomial Test						
		Category	N	Observed Prop.	Test Prop.	Exact Sig. (1-tailed)
Preferences between forms of advertising	Group 1	Internet advertising	178	0.86	0.51	0,000
	Group 2	Advertising on TV	30	0.14		
	Total		208	1.00		

According to the p-value of the binomial test, which is lower than the set level of significance, we reject the null hypothesis and accept the partial alternative hypothesis H2, as it was confirmed that 86% of respondents prefer Internet advertising to TV advertising. 14 percent of respondents said that they prefer TV advertising to Internet advertising.

Partial hypothesis H3: Internet advertising is more preferred compared to advertising in any form.

Partial hypothesis H3-0: Internet advertising is not more preferred compared to any other form of adverting.

We present the result of testing partial hypothesis 3 below:

Table 4. Binomial test, partial hypothesis 3
(source: own research)

Binomial Test						
		Category	N	Observed Prop.	Test Prop.	Exact Sig. (1-tailed)
Preferences between forms of advertising	Group 1	Internet advertising	178	0.66	0.51	0.000
	Group 2	Advertising in any form	91	0.34		
	Total		269	1.00		

The p-value of the binomial test in the Table 4 is less than the specified level of significance, so we reject the null hypothesis and accept the alternative partial

hypothesis that Internet advertising is preferred over any other form of advertising. 34% of respondents said that it does not matter to them in what form the advertisement is implemented, and 66% of respondents prefer exclusively the Internet form of advertisement.

Partial hypothesis H4: Internet advertising is more preferred compared to print advertising.

Partial hypothesis H4-0: Internet advertising is not preferred over print advertising.

The Table 5 shows the result of testing this hypothesis.

Table 5. Binomial test, partial hypothesis 4
(source: own research)

Binomial Test						
		Category	N	Observed Prop.	Test Prop.	Exact Sig. (1-tailed)
Preferences between forms of advertising	Group 1	Internet advertising	178	0.80	0.51	0.000
	Group 2	Advertising in printed form	44	0.20		
	Total		222	1.00		

According to the p-value of the binomial test, we can reject the null partial hypothesis and accept the alternative partial hypothesis 4, as the p-value of the binomial test is lower than the established level of significance. As a result, we can state that up to 80% of respondents prefer internet advertising over printed form, which is preferred by only 20% of respondents.

When verifying the main hypothesis, we came to the conclusion that Internet advertising does not dominate other forms of advertising, as the answers from the respondents showed balanced proportionality. However, when verifying individual partial hypotheses, we found the dominance of Internet advertising. We carried out tests within groups, in which we compared individual forms of advertisement and came to the conclusion that Internet advertising dominated other forms of advertisement in each case. After consultation with the management of the bus company, we decided to also investigate the interdependence between age and advertising preference and gender and advertising preference. We think this view is important for creating targeted advertising for a specific group of customers. We did this using IBM SPSS Statistics. We merged the categories "Less than 15" and "15 to 24" into one category, "Up to 24 years", after discovering that the conditions for the r x s format table were not met after creating a contingency table of real and theoretical abundances; at least 80% of the theoretical frequencies were not 5, and each was not at least 1. We have also merged the categories: "55–64" and "65 and over" into a common category: "55 and over".

We constructed a contingency table of double sorting of the file based on a pair of qualitative variables. The contingency table of actual empirical frequencies is shown in Table 6. We can read from it how many people in individual age categories prefer individual forms of advertising. We can see, for example, that sixty-six respondents under the age of 24 prefer Internet advertising. Ten respondents, aged 45–54, prefer printed advertising and the like.

The contingency table of theoretical abundances can be viewed in the Table 7.

Table 6. Contingency table of real-empirical abundances (source: own research)

Correspondence Table							
	Preference of form of advertisement						
Age	Internet advertising	Advertising on the radio	Print advertisement	Advertising on TV	In any form	No advertising	Total
Up to 24 years	66	4	7	8	39	19	143
25–34	38	0	5	2	12	11	68
35–44	29	1	6	3	13	5	57
45–54	28	2	10	3	16	7	66
55 and over	16	2	16	15	12	4	65
Total	177	9	44	31	92	46	399

Table 7. Contingency table of theoretical abundances (source: own research)

Correspondence Table							
	Preference of form of advertisement						
Age	Internet advertising	Advertising on the radio	Print advertisement	Advertising on TV	In any form	No advertising	Total
Up to 24 years	63.4	3.2	15.8	11.1	33.0	16.5	143.0
25–34	30.2	1.5	7.5	5.3	15.7	7.8	68.0
35–44	25.3	1.3	6.3	4.4	13.1	6.6	57.0
45–54	29.3	1.5	7.3	5.1	15.2	7.6	66.0
55 and over	28.8	1.5	7.1	5.1	15.0	7.5	65.0
Total	177.0	9.0	44.0	31.0	92.0	46.0	399.0

All abundances are at least 1, and at least 80% (in this case, exactly 80%) of the theoretical abundances are greater than or equal to 5. So we formed hypotheses.

Partial hypothesis: H5: The age of the respondents has an influence on the type of advertising they prefer most.

Partial hypothesis: H5-0: The age of the respondents has no influence on which type of advertising they prefer the most.

The significance level: α is equal to 0.05.

Using the test of independence (Pearson's χ^2-test of independence), we verified whether there is a dependence between the two variables. The test results are shown in Table 8.

Table 8. Chi-Square test (source: own research)

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	58,400[a]	20	0.000
Likelihood Ratio	53,637	20	0.000
N of Valid Cases	399		

Note: [a.] 0 cells (.0%) have expected count less than 5. The minimum expected count is 1.29.

We followed the Pearson Chi-Square p-value, which is 0.000. The p-value is less than the significance level α. It follows that we reject the null hypothesis and accept the alternative hypothesis. Thus, the age of the respondents has an impact on the type of advertising they prefer most.

Table 9. Symmetric measures (source: own research)

		Value	Approximate Significance
Nominal by Nominal	Phi	0.383	0.000
	Cramer's V	0.191	0.000
N of Valid Cases		399	

Subsequently, we evaluated the strength of dependence between the variables using the contingency coefficient. We found the Cramer coefficient. This is shown in Table 9.

The value of Cramer's V is 0.191, which is in the interval from 0 to 0.3. It follows that there is a weak dependence between these variables. Subsequently, we performed a test of the significance of the coefficients.

We're looking at the p-value, which is 0.000. The p-value is less than the chosen significance level, α equal to 0.05. Therefore, we reject the null hypothesis H5-0 and accept the alternative hypothesis H5, which states that the age of the respondents has an effect on the type of advertising they prefer the most.

We also decided to find out whether there is a relationship between the respondent's gender and the form of advertising he prefers most.

Again, we did this using IBM SPSS Statistics. We constructed a contingency table of double sorting of the file based on a pair of qualitative variables. The contingency table of real empirical frequencies is shown in Table 10. From it, we can say, for example, that 83 men prefer Internet advertising the most. We also see, for example, that out of 207 women, 23 prefer TV advertising.

The contingency table of theoretical frequencies can be seen in Table 11.

All abundances are at least 1, and at least 80% of the theoretical abundances are greater than or equal to 5. We hypothesized:

Partial hypothesis H6: The gender of respondents affects the choice of advertising

Partial hypothesis: H6-0: The gender of the respondents has no influence on which type of advertisement they prefer the most.

The significance level: α is equal to 0.05.

Using the test of independence (Pearson's χ^2-test of independence), we verified whether there is a dependence between the two variables. The test results are shown in Table 12.

Table 10. Contingency table of real-empirical abundances (source: own research)

Correspondence Table							
Gender	Preference of form of advertisement						
	Internet advertising	Advertising on the radio	Print advertisement	Advertising on TV	In any form	No advertising	Total
Men	83	7	22	8	41	31	192
Women	94	2	22	23	51	15	207
Total	177	9	44	31	92	46	399

Table 11. Contingency table of theoretical abundances (source: own research)

Correspondence Table							
Gender	Preference of form of advertisement						
	Internet advertising	Advertising on the radio	Print advertisement	Advertising on TV	In any form	No advertising	Total
Men	85.2	4.3	21.2	14.9	44.3	22.1	192.0
Women	91.8	4.7	22.8	16.1	47.7	23.9	207.0
Total	177.0	9.0	44.0	31.0	92.0	46.0	399.0

Table 12. Chi-Square test (source: own research)

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	16.831[a]	5	0.005
Likelihood Ratio	17.406	5	0.004
N of Valid Cases	399		

Note: [a] 0 cells (.0%) have expected count less than 5. The minimum expected count is 4.33.

We followed the Pearson Chi-Square p-value, which is 0.005. The p-value is less than the significance level α. It follows that we reject the null hypothesis and accept the alternative hypothesis. Thus, the gender of the respondents has an influence on what type of advertising they prefer most.

Subsequently, we evaluated the strength of dependence between the variables using the contingency coefficient. We found the Cramer coefficient. This is shown in Table 13.

Table 13. Symmetric measures (source: own research)

		Value	Approximate Significance
Nominal by Nominal	Phi	0.205	0.005
	Cramer's V	0.205	0.005
N of Valid Cases		399	

Cramer's V value is 0.205. It lies in the interval from 0 to 0.3. Thus, there is a weak dependence between these variables. Subsequently, we performed a test of the significance of the coefficients.

We are interested in the p-value, which is 0.005. The p-value is less than the chosen significance level, α equal to 0.05. Therefore, we reject the null hypothesis and accept the alternative hypothesis H6, that is, that the contingency coefficient is statistically significant. Based on this, we can say that there is a weak dependence between the variables, and the contingency coefficient is statistically significant. Therefore, we accept the alternative hypothesis because the assumption that the gender of the respondents has an influence on the choice of advertising has been confirmed.

4. Discussion

In the contribution, we dealt with the issue of marketing and promotional aspects used in the environment of companies providing mass transport services. We investigated the attractiveness of Internet advertising used by transport companies from the point of view of customers. For this purpose, the main hypothesis was established, and we investigated whether Internet advertising dominates other forms of advertising that are used by these companies. We verified this hypothesis through a binomial test, the result of which indicates that Internet advertising does not dominate other forms of advertising. For the purposes of deeper findings in the context of marketing communication tools, we have defined several partial hypotheses. The first four partial hypotheses were established in order to determine the attractiveness of Internet advertising compared to specific types of advertisements. In the first partial hypothesis, we investigated customer preferences for two types of advertisements: Internet advertising and radio advertising. We assumed that Internet advertising would be more preferred than radio advertising from the customers' point of view. According to the result of the binomial test, which we used to verify this hypothesis, it can be stated that it is confirmed. We found that 95% of respondents prefer Internet advertising to radio advertising. The second finding related to the comparison of preferences between Internet advertising and TV advertising. This finding resulted from the verification of the second partial hypothesis. According to the result of the verification of this hypothesis, we conclude that 86% of respondents prefer Internet advertising and 14% indicate a preference for TV advertising. In our survey, several respondents said that they did not care about the specific type of advertising addressed to customers by shipping companies. That's why we were interested in such a comparison. So we compared Internet advertising with advertising in any form. For the purpose of this finding, a third hypothesis was defined. The result of its verification points out that 66% of respondents prefer Internet advertising, and 33% of respondents said that it does not matter to them what form of advertising is addressed to them. The result confirms the dominance of Internet advertising in this case as well. Another of our findings related to the comparison of Internet advertising with advertising in print form. This finding was related to the fourth hypothesis, which revealed the result of the testing. According to the binomial test, 20% of respondents prefer print advertising, and 80% prefer Internet advertising. Based on the results of the four partial hypotheses mentioned, we can claim that when comparing the Internet form of advertising with other forms, it clearly follows that Internet advertising is more preferred than other forms. This finding of ours is consistent with the findings of other researchers who confirmed that the most preferred form of advertising is internet advertising (Behun et al., 2018). We consider our finding to be beneficial for transport companies, as it shows which type of advertising is most preferred among passengers and is the communication tool that should be focused on the most.

In connection with the preference for a given type of advertisement, we also investigated the influence of age and gender on this aspect. Based on the findings, we can reveal whether these variables influence the preference for a particular type of advertisement. For the purpose of these findings, we established the last two partial hypotheses, hypotheses 5 and 6. In order to be able to determine the effect of variables on the preference for the type of advertisement, we first needed to classify the respondents' answers into contingency tables. Subsequently, we were able to verify the dependence of the studied variables. When investigating the influence of age and gender on the

type of preferred advertisement, we used the Chi-Square test. We examined the strength of the dependence of the variables through the contingency coefficient, Cramer's V. They found that there is a statistically significant dependence between age and the preference for a specific type of advertisement, and the strength of this dependence is weak. In the second case, we came to the conclusion that there is also a statistically significant dependence with a degree of "weakness" between gender and ad type preference. Despite the fact that the basic hypothesis was not confirmed, we confirmed the importance of Internet advertising with partial hypotheses. From the statistical comparison, we also found that the age and gender of the respondents influence the preferences of bus customers. Based on these results, it can be concluded that it is very important that the marketing campaign be adapted to the target group of customers. If the target group is addressed with the right advertisement, the management of the company will have a high probability of success. In general, the respondents prefer Internet advertising, and most of these respondents were in the age group of 35 to 44 years. Predominantly women (207 of them participated in our research) stated in their answers that they mainly use Internet advertising, the other preferred form of advertising among women was advertising in any form and advertising in printed form. There were 192 men who participated in our survey. Men, like women, prefer Internet advertising over advertising in any form, and 31 men said that they do not need any advertising. Bus transport is currently marked by the COVID-19 pandemic period, which has introduced certain limits to the use of mass transport. People adopted traveling through their personal cars, which was observed especially during the crisis, and this phenomenon was also transferred to the present, when people got used to a certain comfort resulting from the use of their own transport (Warnock-Smith et al., 2021; Esmailpour et al., 2022). In the context of this limit, there should be a quasi-revival of awareness about using public mass transportation, which is closely related to the support of marketing tools, especially advertising. Customer preferences and needs must be considered when creating a marketing strategy for bus companies. Passenger satisfaction is influenced by multiple factors, many of which are highly subjective. The aim is to keep passengers using bus services and to convince potential passengers to consider whether a quality bus service would be a better solution for their transport needs. Mainly in order to retain customers and attract new ones, it is necessary to offer reliable, safe bus transport, which can bring significant benefits to passengers. Recent years have been significantly affected by the COVID-19 pandemic. Among other things, this was also reflected in the marketing approach of bus carriers. In order to find out more about the current situation, we conducted a structured interview with the management of the largest bus transport company in the Zilina Region. We can assume that this situation also disrupted their marketing activities. They relied on current events in the country. Due to the situation, the company did not organize some actions and events; buses ran only in a limited mode; all client centers were closed until further notice; and passengers were prohibited from entering the bus without a protective mask and sitting in the first row of seats behind the driver. During this period, businesses encouraged passengers to pay cashless on the bus. All these elements had a negative impact on the attitude of passengers towards the use of public transport. The company's management also drew attention to the fact that the crisis had a negative impact on suburban transport. The authors Shortal et al. (2022) and Tirachini and Cats (2020) also agree with this statement. In 2021, there was a decrease in passengers of approximately 30%. And that represents a significant number from the point of view of the sales shortfall.

The importance and essence of the marketing strategy of bus transport with regard to the preferences and needs of public mass transport customers are currently indispensable from our point of view. If businesses are interested in retaining their customers, they simply need to consider their needs. If customers and what they want are not taken into account when defining the strategy, it will not motivate customers to use the services offered by the company. This is all the more important in the post-pandemic period, when many people prefer personal transport to public transport even more. The results of our research reflect these circumstances. In the first part of the survey, we dealt with selected elements of the marketing area of transport companies and examined what opinions our respondents would have about them. In the second part, we examined the dominance of Internet advertising compared to other forms of advertising through hypothesis testing. Our proposals in the subject area are based on the results found. It is important that the marketing campaign "speaks" the language of the customer's requirements and preferences. Only then will it be lucrative, interesting, and perceived as beneficial for the customer. From this point of view, we present topics from the field of public transport marketing in the area of the website and online space of bus operators, cooperation with ecological companies in the region, loyalty programs, but also a pleasant aroma that will calm passengers and make their journey more pleasant. We also recommend a regular connection. All these proposed aspects should be communicated to the customer in the form of advertising. We consider them a beneficial topic for building the marketing of a modern bus transport company. Given that Internet advertising appears to be the most popular form of advertising in our research, we recommend that shipping companies increase their use of online marketing tools. Based on the results of the questionnaire survey, we think it is necessary for bus operators to use online tools more. From our point of view, the online space of this group of companies is very poorly used. We state this also on the basis of the findings from the questionnaire survey, which related to the use of the virtual transport card and the e-shop. In our opinion, the lack of customer information is a weakness of bus operators in the entire Zilina region. Through

the questionnaire survey, we further found out that respondents most often learn news and updates about the company through the company's website and posters on buses. Based on this finding, we propose the creation of a chatbot and live chat on the website that could help customers with their questions. A chatbot is a computer program that works in a conversational environment. It simulates a normal conversation between people. In real time, it can communicate with a considerable number of users at once and with each one separately (Gajdosikova et al., 2022; Galabova, 2021; Makienko & Rixom, 2022). The chatbot helps site visitors answer their questions or select goods. The company that chooses a chatbot sets the questions and answers that the chatbot will write to site visitors. If he gets a question he can't answer, he leaves it to the company itself or live chat. We consider this proposal to be justified because many respondents answered that they did not have sufficient information. In the event that customers do not know how to orient themselves in the online space of the transport company, they would be able to turn to help through this proposed tool and, over time, gain insight into the use of the online site. Chatbots are often used on sites where various products are sold. We would suggest using this tool as a way to better inform site visitors and communicate with them. How to use the company's various services, how to get, for example, the mentioned virtual transport card, how to claim a discount on a purchase, etc. However, many people do not know about it at all or do not know how it works. Chatbots are therefore, from our point of view, a reasonable choice for bus transport companies, where the customer can access information quickly and easily. And if the topic interests him, the chatbot will refer him directly to where he can read more about it using the link in the reply.

The second marketing proposal is the creation of a loyalty program for customers, which could motivate passengers to use public transport. This proposal would also have to be communicated to the customer in order to increase awareness of the benefits of using public transport. We suggest that bus companies create a loyalty program that rewards passengers who regularly use the company's services. There are many alternatives to loyalty programs. From our point of view, one of the alternatives is rewarding passengers based on the number of trips they take during the calendar year. It is a program that would be appreciated, especially by those passengers who have used the company's services regularly and for many years. Another option is to earn points. In this case, as in the previous one, it is necessary for the passenger to use the transport card of the bus company. He gets one point for each trip. Subsequently, he will be able to use the collected points in different variants. For example, a free trip, the possibility of obtaining interesting advertising items, or a competition for interesting prizes, which would link the website and Facebook page of the company and increase viewership and awareness of the company, would also be useful. The third suggestion is to raise awareness of the ecological benefits of using public

mass transportation. Public mass passenger transport represents a more ecological alternative to travel. Modern buses produce less harmful emissions from travel than cars with internal combustion engines, which are currently still in large numbers compared to electric cars (Paluch et al., 2018). A positive perception of the carrier in the field of bus transport will also be made possible by cooperation with other companies in the region. From our point of view, cooperation or partnership with companies in an ecological context is essential. An example is cooperation with a popular coffee shop in the region, where in exchange for various discounts for the company's customers, we assume satisfaction on the part of the customer and cooperating companies. Another marketing proposal that would encourage passengers' interest in using public transport could be a combination of fragrance and travel, which would bring a sense of cleanliness and pleasure to customers. Scent marketing, also known as aroma marketing or perceptual marketing, is a relatively new form of marketing in the Slovak Republic. It deals with how different specific scents can stimulate the human senses and create appropriate emotions in business and presentation environments. Thanks to this, it is possible to purposefully change the behavior of customers and employees and thus improve their experience with the company (Ackermann-Szulgit & Matlakiewicz, 2020). It is the scents that create lasting memories that a person stores subconsciously and remembers olfactory sensations for several years. Many people travel by bus every day. Sometimes it can happen that different smells, whether from smoking, body odors, etc., are unpleasant for passengers. However, they can be effectively removed using aroma marketing. And so you can travel, for example, with the pleasant smell of washed laundry or the ocean, which can awaken a feeling of cleanliness and freshness in people. We propose this based on the fact that 53 passengers expressed that it would motivate them to use or improve cleanliness for more frequent use of the service. For the second option, one respondent also wrote that he would be motivated if he had a sense of cleanliness in the bus, which is directly related to the smell in the bus. In our opinion, such a proposal would interest passengers, and if such an element were promoted in the form of Internet advertising, it would, in our opinion, arouse both interest in the transport company's advertisement and the need to try aroma marketing in the means of transport.

The fifth recommendation is to observe the regularity and accuracy of connections. Based on the results of the questionnaire survey, it can be concluded that the factor that would motivate the respondents to use or to use the company's services more often is a greater number of connections in the timetable. Several respondents in the questionnaire stated that, according to them, there is a problem connecting to work on the second shift. If the passenger has a specific request to change the travel schedule, he has the opportunity to contact a specific municipal office that is the company's partner in

changing the travel schedule. In view of the established facts, we recommend that the company, in cooperation with the city authorities, conduct a survey that would focus on determining the interest in a greater number of connections in the timetable. And at the same time, as part of the survey, give passengers the opportunity to suggest times when they would need to add connections. For many respondents, the motivating factor for using the company's services would be an increased frequency of bus transportation. All our proposals should be communicated to the customer first of all in the form of internet advertising, where we have found dominance compared to other forms of advertising, and also by print advertising, which would be published in the means of transport or at bus stops. We tried to transform the information obtained from the questionnaire survey into measures that generally indicate possible ways of their practical use. It is up to the management of the bus operators whether they use these topics or not. From our point of view, the analysis of customer requirements is crucial in the current, rapidly changing era. Previously, crises occurred at long intervals; however, their occurrence is currently very dynamic. The COVID-19 pandemic was managed, but on the other hand, the world was hit by an energy crisis caused primarily by the situation in Ukraine. According to the Statistical Office, for the year 2022, all monitored sectors of the economy in the Slovak Republic recorded an increase in the average wage, but in no case did this growth reach the level of inflation. Macroeconomic indicators are expected to underperform. It manifests itself primarily at the level of businesses and households. However, from our perspective, this could be a huge opportunity for public transportation companies. This situation creates room for saving on travel costs. Public mass transport is a cheaper alternative than a private car because the costs of acquiring a vehicle, its maintenance, and subsequent care are eliminated. It is also cheaper to go to work, school, vacation, shopping, or a social event by public transport. We are preparing further surveys focused on how travel costs affect individual and family budgets. We are interested in how the level of income affects preferences when choosing transportation. From June 2023 on, there will be an increase in the price of transportation in the Zilina region. The vision of the following research would also consist of determining customer satisfaction with higher fares and their opinion on whether it is financially worthwhile to use public transport or whether they would continue to use their own means of transport. It would also be interesting to find out what criteria public mass transportation should meet in order to become their first choice for transportation. Nowadays, it is also important to point out that public mass transportation is ecological. In the EU, the trend is to eliminate car ownership and to use public mass transport more (Thomassen et al., 2021). We see this situation as a huge opportunity for public transportation companies. If their communication with the customer is directed in a way that suits him and points to the needs that the customer wants to solve, it will be effective and successful. From our point of view, the opinion of experienced employees or marketers who have been in their positions for a long time is also important. Their experience, combined with current research, can benefit any business. We would also like to draw attention to the necessity of analyzing published surveys. Many authors have written about public transportation, customer satisfaction, and other topics. Every view and idea can be a benefit and a new opportunity.

This contribution summarizes the current situation in selected areas of marketing for companies providing mass transport services, which are crucial from the customer's point of view in the conditions of the Slovak Republic. Since we did not find a similar survey in Slovakia, we consider the results of this survey to be useful in business practice for bus transport companies in Slovakia. These outputs are an important basis for the management and marketing of these enterprises in the conditions of the Slovak Republic, especially from the point of view of competitiveness. They can be used by both existing and emerging businesses in the industry. Therefore, we conclude that the outputs are of an international nature, as the emerging enterprise can currently also be from another EU member state. Given the similar business environment in at least the V4 countries, the results of our survey can be used as a starting point for investigating the subject area under the conditions of another country.

Conclusions

In this article, we researched and analyzed customer preferences in bus marketing. We tried to point out facts important in the marketing field for the operation of bus transport companies. In a structured interview with managers, it emerged that the priority is the creation of effective and targeted advertising for a specific group of passengers. The main hypothesis that travelers prefer Internet advertising was not confirmed, but we subsequently confirmed the importance of this form of advertising with partial hypotheses. We supplemented the needs and preferences of customers with a structured interview with the management of a bus transport company in the Zilina region and with proposals that, from our point of view, can be used by all companies providing services in this industry. Continuous monitoring of customer preferences is currently a necessity for business competitiveness.

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