

Article

# Digitalization of the Marketing Activities of Enterprises: Case Study

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**Abstract:** The pace and scale of the digitalization of today's global information society open up new opportunities for business. At the same time, they set new challenges for business owners and managers in the field of marketing. Given this fact, the purpose of the study was to present the impact of digitalization on the marketing activity of the enterprise in the field of services by promoting the use of online sales via electronic distribution channels, social networks, and mobile applications. A comparative system of estimating the parameters of the influence of digitalization on the marketing activity of the enterprise was proposed as a confirmation of this impact. Based on the developed "tree of goals," the dynamics of the digitalization of services were projected and the prospects of development of this sphere of activity were outlined. For testing the proposed methodology, the railway passenger transportation company (JSC "Ukrzaliznytsia") was chosen as the object of the research. Research methods used in the study include: (1) statistical; (2) SWOT analysis; (3) systematization, comparative, and structural-dynamic analysis; and (4) an expert survey. As a result of revealing the impact of individual elements of digitalization on the level of marketing activity, the number of recommendations regarding the development of digitalization of electronic ticket sales services and their accounting for enterprises dealing with railway passenger transportation were proposed.

**Keywords:** digitalization; marketing activity; management; electronic tickets; joint-stock company "Ukrzaliznytsia"; electronic distribution channels; sales activity

## 1. Introduction

The global information society, coupled with modern innovative capabilities, contributes to the digital transformation of countries, industries, and individual companies. Due to digitization, economic growth is achieved, and the competitiveness of goods and services increases. Given the significant scale and pace of digital transformations that take place today, the speed of responding to their main trends is a significant competitive advantage. In common practice, one of the most successful tools of information and communication technologies determines digitalization [1]. The development of the information society, the smart economy, and globalization processes make it necessary to digitize

the marketing activity because consumers prefer those brands and companies that quickly master the use of digital channels. However, [2] emphasize that the uniform approach to this process must be refused because of the specifics of national socio-cultural profiles of consumers. At the same time, the number of business processes is increasing under current conditions, which requires new methods and approaches to the transformation of views on managing the marketing activity of an enterprise. The experiences of many foreign and domestic companies indicate the significant impact of digitalization on sales activities as an essential element of the enterprise's marketing system. Digital methods of processing and using information are a major source of efficiency and effectiveness of such activities [3].

Modern globalization challenges contribute to the rapid implementation of the latest innovative capabilities of the digital world and the activity of railway transport as the leading industry in the road transport industry of the country. JSC "Ukrzaliznytsia" [4] which was one of the first companies that actively digitized its work, was selected to test the proposed methodology. In particular, it refers to the digitalization of the sale of electronic tickets. Competition in the market of transport services requires enterprises to introduce new approaches to the provision of quality online ticket sales services. The JSC "Ukrzaliznytsia," which is directly involved in the sale of electronic travel documents, is interested not only in their confirmation and sales, but also in promoting them among various modern social platforms and networks, tracking demand for specific areas, determining the need for additional wagons or trains, and identifying problems which online buyers may face.

The paper investigates the impact of digitalization on sales activity (as one of the key components of marketing) in the service industry. The main advantages of digitalizing the sale of electronic travel documents are the following: the facilitation of communication between the person and the information system; the ability for passengers to use devices to obtain real-time data on the availability and number of available seats in a particular car and train; the ability to receive information about the number of passengers traveling on a particular train in real-time; the ability to plan and organize the required number of trains on different routes according to customers' requests; and openness and accessibility of services to consumers, regardless of their location and time of day. Although there are the works of scientists, practitioners, and managers that are devoted to the study of this problem, the impact of digital technologies on marketing activities in general, and in particular, on sales in service sectors, such as the implementation of travel documents of enterprises providing railway transport, has not been sufficiently investigated from a practical point of view. That is why our goal was to present the impact of digitalization on the effectiveness of marketing activities of the enterprise.

## 2. Literature Review

The term "digitalization" has come into use since the middle of the last century. The Oxford English Dictionary [5] interprets it as accepting or extending the use of the digital or computer technology of organizations, industries, countries, etc. Castells [6] understands that the new economy, society, and culture under the digitalization considers this concept as one of the characteristics of the modern era. Other authors, such as Brennen and Kreiss [7], point out that digitalization has been referred to as structuring many different areas of social life around digital communications and media infrastructure. According to Parida et al. [8], the necessary condition for maintaining its competitive position or its conquest in our time is not only the use of computer technologies, but also the transition to modern innovative business models.

The digitalization is a necessary process for the development of modern organizations. Its main task was to simplify and accelerate the work with large data sets, automate the activity of the enterprise, and establish communications with the external environment. However, there are several major obstacles to implementing the digital business model of an organization based on digitalization. These include the lack of a digitalization strategy, a low level of staff competence in this area [9], fear of change, lack of funding, low level of thinking, and the needs of Internet customers. Modern organizations are not yet able to simultaneously use all the directions and possibilities of digitalization. Most often, they use only individual technologies, and as a result, such a situation negatively affects the development

of the enterprise and reduces its competitive advantages. Consumers increasingly value their time, meaning they need instant feedback, as well as well-designed information resources, online chats, and an individual approach. The expectations of customers regarding the speed and quality of service provision are growing rapidly. To meet the high needs of clients, companies shall accelerate the digitization of their business processes, that is, to digitalize the work of the organization. According to Honore [10], the concept of “digitalization” is the optimization of a business with software and IT solutions that will make it simpler, more cost-effective, and better in the context of customer service delivery and satisfaction. Based on this definition and a review of the literature on the problem, the definition of digitalization of electronic ticketing services as a transformation and improvement of use of digital technologies was developed to improve and expand the channels of business processes related to the sale, as well as the accounting of electronic travel documents through various online services and media channels.

Problems of digitalization and the digitization of marketing activity are covered in many works. They focus on different aspects and analyze the topic from different points of view. In particular, the influence of digitalization on the activity of the enterprise is raised by Chudaeva et al. [11]; Trasca et al. [12]; Lerch and Gotsch [13]; Brennen and Kreiss [14]; Verhoef et al. [15]; and Singh and Hess [16]. In turn, Majerova [17]; Rachinger et al. [18]; and Verhoef and Bijmolt [19] investigate its innovative and digital business models. Works of other scholars were related to the major trends in the digital transformation across different scenarios [20], models of marketing diversification [21], expediency of using electronic communication technologies [22,23], the influence of the trend of marketing digitalization on consumers [24], and digital transformation technologies for large companies [25,26]. Furthermore, other researchers concentrate on the application of digitalization, such as in terms of the network of Portuguese companies [27], banking [28], the problem of digitalization in the retail trade [29,30], and the change of marketing approaches to the consumer through the lens of digitalization of marketing activity [31,32]. Finally, there are works that propose an original event management architecture based on the holonic principles to improve the monitoring and diagnostic processes of a fleet of mobile systems in order to design an effective event management system for trains [33], and explore the statistical distribution models of high-speed railway train delays [34]. However, some aspects of research on railway transport deserve special attention, for example, research on the study of social factors as important components of the digitalization of the business model of railway transport enterprises [35], as well as major opportunities, challenges, and prospects for the digitalization of the rail industry [36–39].

### 3. Materials and Methods

The research methodology included tools that made it possible to evaluate and determine the impact of digitalization on the enterprise’s marketing activities, as follows: methods of systematization—to summarize the theoretical achievements of scientists for the development of the concepts of “digitalization of services for the sale of electronic tickets”; benchmarking—to conduct a structural and dynamic study of the implementation of electronic travel documents through various sales channels through online services, in particular, to determine the growth rate of the number of purchased railway tickets; linear regression analysis—for the construction of predictive models of specific weights of electronic travel documents in their total number for 2019–2020 (based on the results of the retrospective analysis for the years 2011–2018); methodology of a system analysis for the choice of methodological apparatus of research in the comparative system of assessing the impact of digitalization on the marketing activities of JSC “Ukrzaliznytsia”; SWOT analysis—to identify the main features and threats of digitalization of services for the sale and accounting of electronic travel documents; using the expert method surveyed to identify passengers’ awareness of online ticketing services; determining the preferences of the passengers of the Ukrainian railways in choosing the methods of buying an electronic ticket; and evaluation of the organization of services for the registration and payment of a ticket. This study used data from 11,116 respondents who were the

users of rail passenger services. Among other basic parameters of the questionnaire, the following was identified: the form of the study—an individual questioning, the frequency—one-time, and the type of expert assessment—questioning-opinion. The questionnaire consisted of 10 questions and forms for filling in the personal data of the respondent. The questions were of open and closed formats. The authors used the statistical methods to process the data obtained from a survey among consumers of Ukrainian railways services. Recommendations for the development of the digitalization of electronic ticketing services and their accounting for the enterprises engaged in railway passenger transportation are proposed.

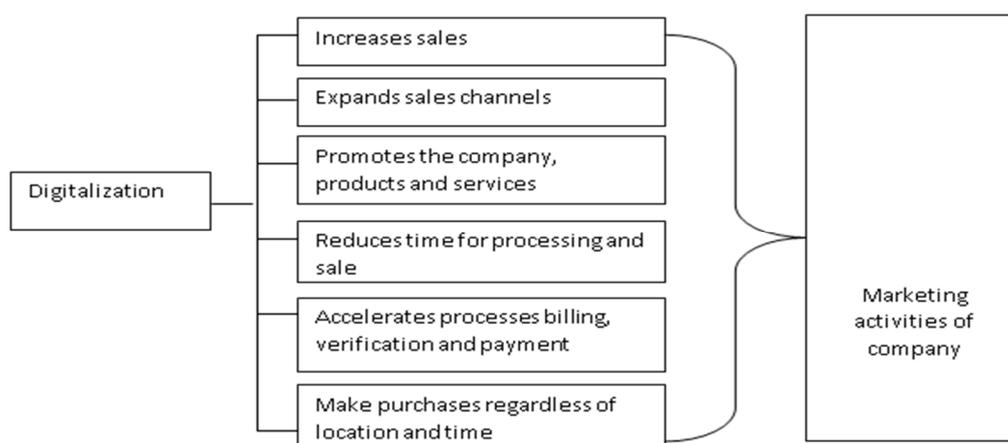
#### 4. Results

The main components of digitalization are the following: cost structure, consumer segments, sources of income, channels of sale of goods and services, the structure of relations with consumers, key partnerships, types of resources, types of activities, types of business processes, etc.

Business process digitalization involves defining and analyzing the main goals and objectives, identification of the main benefits of digitalization of business processes, selection and implementation of digital technologies, checking and analyzing the effectiveness of the digital solution, and making adjustments as needed.

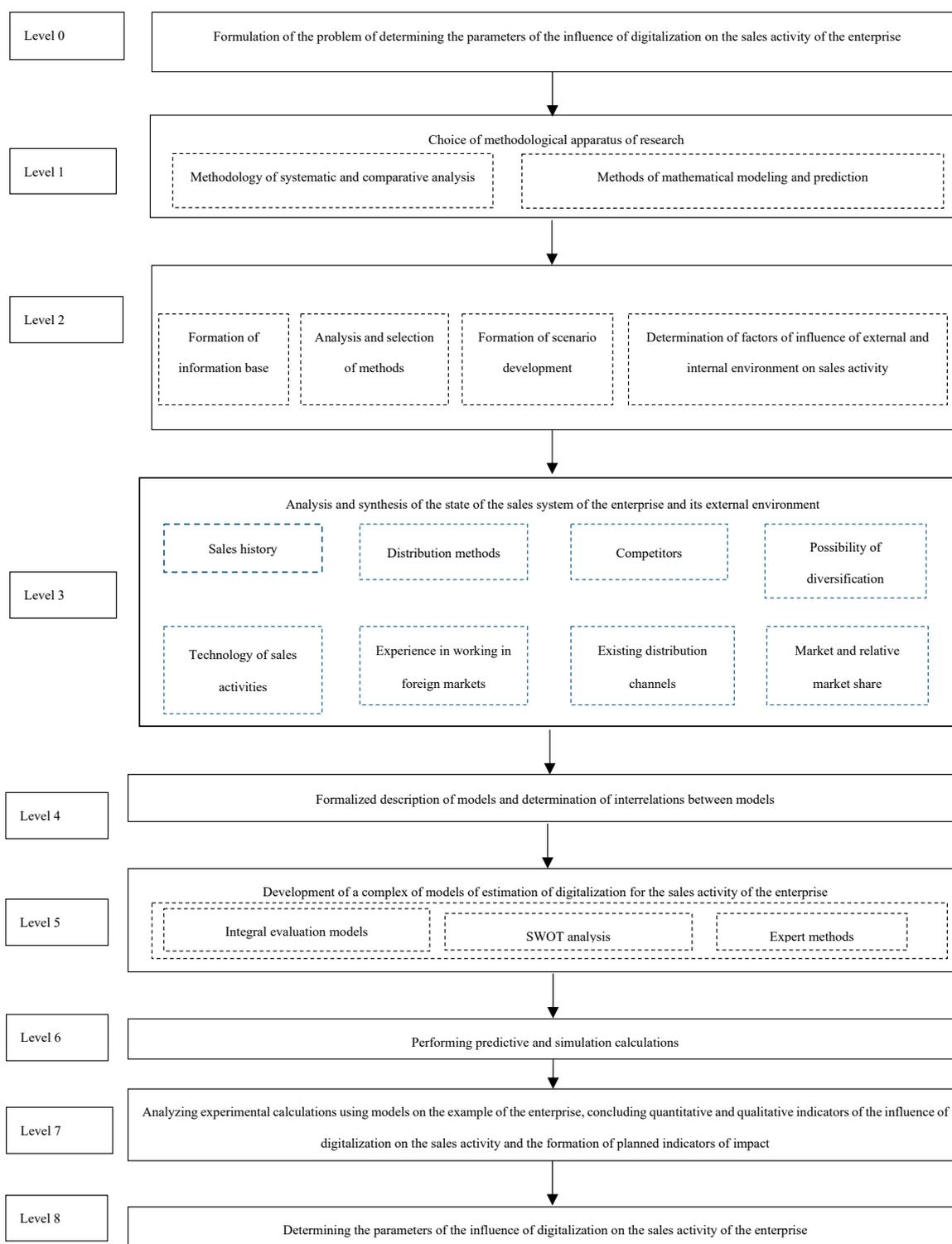
The realized research made it possible to identify and systematize the main factors of the impact of digitalization on business processes, including the sales activity of the company: increasing the competitiveness of the company, goods, and services in the domestic and foreign markets; increase in sales of goods and services; acceleration of all business processes; promotion of efficient production, economic, financial, logistic, information, and marketing activities; more rational use of available resources; coverage and processing of large data sets in a short time; improving economic security; raising customer awareness of the company, products, and services; and the opportunity for consumers to purchase goods and services online through various online platforms, mobile applications, and social networks.

In general, the mechanism of the impact of digitalization on sales activity (including marketing activities) is presented in Figure 1.



**Figure 1.** Key factors of the impact of digitalization on marketing activities.

Using the system approach, which involves a comprehensive and purposeful study of objects based on system analysis, the parameters of the influence of digitalization on the sales activity are determined. Per the methodology of this analysis, a “tree of goals” was developed, with a general goal on the pinnacle, namely the impact of digitalization on sales activity, depending on environmental factors (Figure 2).



**Figure 2.** The level system for assessing the influence of digitalization on the sales activity of the enterprise.

Each of the main objectives of the research of the influence of digitalization on sales activity includes a set of subcontracting tasks (sub-goals), which were considered in the context of the developed “tree of goals” to solve the main problem.

The goals of levels 1–8 were transformed into functions of the system as a whole, of subsystems, and of elements. Furthermore, the sub-goals of the lower levels (parameters), which were the means of

achieving the higher-level goals, transformed into tools by which the functions were realized and the reverse process of the composition network of tasks was carried out; this involved the achievement of the main goal, namely to determine the parameters of the influence of digitalization on sales activity.

The achievement of the general goal was influenced by various conditions and restrictions of an economic and informational nature.

After formulating the problem and defining the system and factors of the environment, as well as the main goals and objectives of the research for determining the parameters of the influence of digitalization on sales activity (components of the goal of level 0), the transition to the goals of the first and second levels of the specified “tree of goals” was realized, namely the choice of methodological apparatus for research and systematic analysis of the influence of digitalization on sales activity.

To analyze the retrospective period and identify the main trends in its development, as well as the correlation of indicators that characterize these trends, the development of information support to solve the problem of determining the influence of digitalization on sales activity was a necessary stage of this research.

The preparation of information support involved the collection and processing of output data for the formation of a database, which would later serve to generate equations, model solutions, and analyze the data obtained.

The implementation of the goals of the various levels was carried out using scientific methods, integrated into the tools of system analysis. Informal, graphical, quantitative, and simulation methods may be the principal ways of implementing the developed comparative system of the influence of digitalization on the sales activity under the above conditions and restrictions.

The presented level of systematic assessment of the influence of digitalization on the sales activity of the enterprise was proposed to be applied to JSC Ukrzaliznytsia. In particular, at the first level, the choice of methodological apparatus of the research was made: methodology of systematic and comparative analysis, and methods of mathematical modeling and prediction. At the next level, an information base was formed, methods of influence of digitalization were analyzed and selected, and so on.

The third level included the analysis and synthesis of the sales system of JSC Ukrzaliznytsia and its external environment, including the sales history, distribution methods, and channels, as well as the marketing technologies.

In late 2008, the JSC «Ukrzaliznytsia» launched its first stage on the way to digitalization, where tickets were introduced through the official website of the JSC «Ukrzaliznytsia» [40] a network of agents was created, through which electronic tickets could be issued through online services. These include PrivatBank [41], Oschadbank [42], ticket sales sites [43–47], and other online resources. Extending the functionality of digitalization, the online ticket sales service for mobile apps allows storing them in the AppleWallet app and adding travel information to Google Calendar.

Within the period from 2011 through to 2018, the JSC «Ukrzaliznytsia» sold a total of about 435 million travel documents, while the share of purchased electronic tickets was 18.31% or about 79 million electronic travel documents. The systematized and calculated indicators of the number of registered and sold electronic travel documents for this period are presented in Table 1.

The structured-dynamic analysis conducted during this period demonstrated a growing linear tendency of sales of electronic tickets through online services from 1.06% in 2011 up to 50.13% in 2018. If we consider growth rates by years, then there was a nonlinear and uneven structure. The largest increase in sales of electronic travel documents was observed in 2012. In 2018, this figure was 1.26 and showed an increase in sales of e-tickets through online services by 26% compared to 2017.

The use of linear regression analysis made it possible to build predictive models of the proportion of the total number for 2019 and 2020 as electronic travel documents. The accuracy of the developed model was based on the ex-post forecast for 2011–2018. The model was based on transformed information, where all regression equations and their parameter estimates were statistically significant, the model was adequate, and absolute and relative prediction errors were within acceptable limits with

a given level of significance. Therefore, the forecast values of the share of electronic travel documents in the total number of travel documents for 2019 will be 55.57%, and 63% for 2020. As we can see, over the eight years studied, linear dependence was observed, and the forecast for the next 2 years also showed a linear increase in these specific weights.

**Table 1.** Dynamics of indicators of issued and purchased electronic travel documents at the JSC «Ukrzaliznytsia».

Year	Total Number of Seats (pcs)	Number of Purchased Electronic Travel Documents (pcs)	Proportion of Electronic Travel Documents in Total (%)	Growth Rate Factor of the Number of Electronic Travel Documents Purchased
2011	65,758,800	693,868	1.06	-
2012	61,749,966	2,116,753	3.43	3.05
2013	61,008,208	4,758,197	7.80	2.25
2014	45,306,511	5,823,801	12.85	1.22
2015	43,624,429	11,746,090	26.93	2.02
2016	48,784,030	16,651,167	34.13	1.42
2017	53,669,618	21,944,761	40.89	1.32
2018	55,183,763	27,664,464	50.13	1.26

A formalized descriptions of models and definitions of their interrelation were realized at the fourth level.

The fifth level envisaged the development of a complex of models for the evaluation of digitalization of sales activity of the enterprise, consisting of a model of integral valuation, SWOT analysis, and application of the method of expert assessments.

The potential of SWOT analysis was used to further investigate the issue of the digitalization of electronic rail ticketing services. The application of this method made it possible to identify the main opportunities and threats of the digitalization of services for the sale and accounting of electronic travel documents. The main opportunities for digitalization include increasing the popularity of online ticketing services through mobile applications and social networks, and attracting additional agents to expand their network in Ukraine and abroad. Threats include the risk of unauthorized access to customer payment systems data and the possibility of hacking attacks on the site of JSC «Ukrzaliznytsia».

Considering the strengths and weaknesses of the results of this analysis, it was possible to conclude there was a need to improve the existing system of selling online tickets. The strengths included saving time on the confirmation of an e-travel document through online services without being tied to a place or time of purchase. On the contrary, the weaknesses were as follows: the issues of information security, cybersecurity, and protection of personal data; imperfection of the personality of life and protection of human rights by digital technologies; changes and protection of trust in cyberspace; failures and technical malfunctions in the work of the site of the enterprise; lack of an opportunity to purchase an online ticket for additional in-house trains; and in the case of traveling with additional or international trains traveling in conjunction with the Commonwealth of Independent States (CIS) countries, a passenger shall first confirm and pay the ticket online, such that an order form is exchanged at the railway station for an ordinary paper ticket that will be sent to his mailbox. This, in turn, creates some additional time costs.

The growth in demand for the purchase of railway tickets through online services and sales channels requires the involvement of additional personnel in the process of the digitalization of electronic ticketing services and their accounting. This will significantly expand the sales channels and increase the sales of electronic travel documents. It is proposed that such functional duties are to be imposed on Social Media Manager (SMM) managers. The basic skills of SMM managers shall be as follows: knowledge of the basics of marketing; ability to analyze potential service users;

knowledge of the basics of sales psychology; ability to quickly study and analyze the potential audience; ability to analyze the needs in certain areas of railway services; ability to evaluate the activity of services in social networks; use of different methods in promoting services through planning, advertising, and collaboration with bloggers, etc. Engaging SMM managers, in our opinion, will enable representation of the enterprise interests of online electronic ticketing through social platforms and networks, and constantly increase the popularity of the railway services provided due to them being more environmentally friendly and safer than other types of transport.

The results of the conducted survey made it possible to conclude that there was no complete volume of information for identifying the advantages of railway transport passengers when choosing the method of booking, confirmation, and payment of travel documents. Thus, one of the important prerequisites for identifying problems in this area was lacking, as well as the adoption of appropriate management decisions by enterprise management. This resulted in the practical significance and feasibility of using expert assessments as a method for obtaining conclusions on the main advantages of users of passenger transportation by rail.

To identify the benefits of passengers when choosing the method of booking, confirmation, and payment of travel documents in 2016, a questionnaire was carried out of passengers of six regional branches of the JSC «Ukrzaliznytsia». The results of the questionnaire were as follows. The age structure of respondents' sample was distributed in the following way: up to 18 years old—7%; from 18 to 29 years old—29%; from 30 to 44 years old—37%; from 45 to 60 years old—38%; over 60 years old—4%; respondents who did not give any answer about their age—8%. The data on the main types of occupations (of six railways) was systemized as follows: the largest share was professionals, workers, employees (32%), then students and schoolchildren (22%), and entrepreneurs (17%). Smaller shares characterized the following categories: civil servants (13%), temporarily unemployed (9%), housewives (9%), managers (8%), pensioners (6%), and other categories (1%). It should be noted that 8% of respondents did not answer the question about their occupation. One-third of the respondents lived in the oblast centers of the country, 22% in large cities, 24% in rayon centres, and every sixth passenger lived in Kyiv.

The frequency of trips by rail was mostly high or moderate: monthly (28%) or several times per year (also 28%), once a year and less frequently (23%), weekly (15%), commercial travel (19%), and business trips (18%). The purpose of the trips of the respondents was mostly personal affairs (24%) and study (21%). These goals should lead to a rather high frequency of calls to transport services, and therefore their growth was observed. It should be noted that the pattern of distribution of the frequency and purpose of travel among the respondents was characterized by unevenness in the context of the six regional branches.

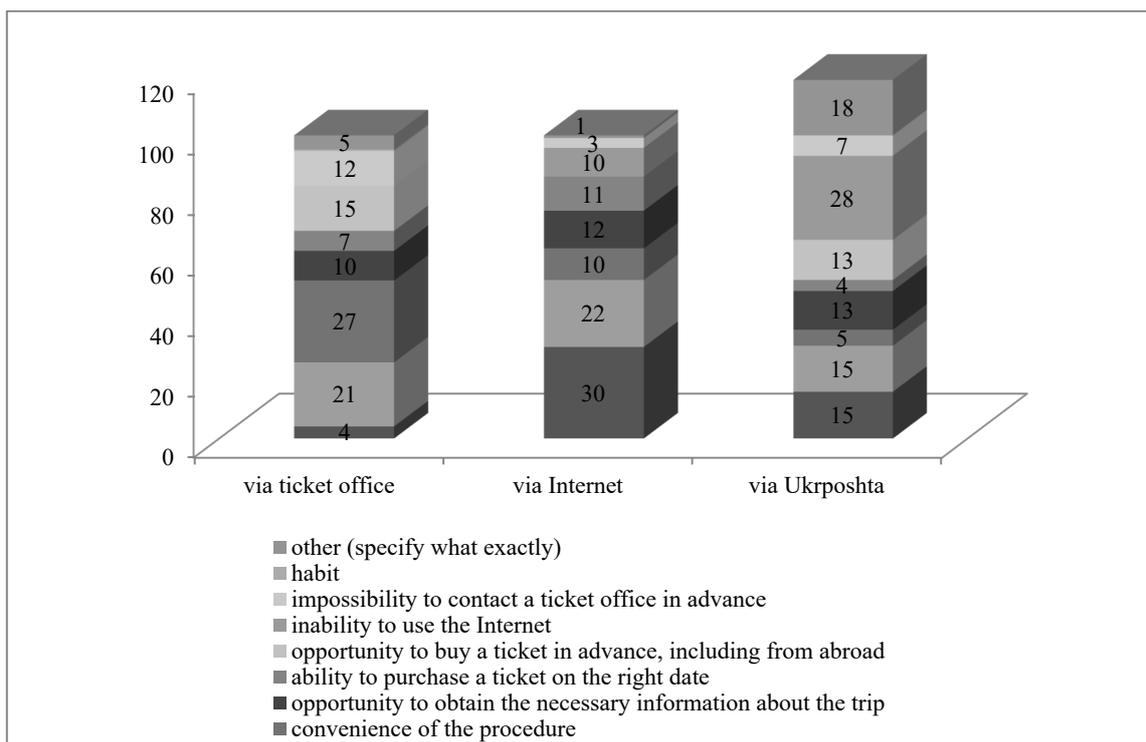
Taking into consideration the certainty and/or stability of the purposes of travel, 51% of respondents planned their trips, where 25% booked not less than a month in advance, and 26% booked not less than a week in advance. Approximately one-fifth of respondents (22%) decided on a trip within a few days, 12% of respondents made such a decision only on the eve of the trip, and 8% on the day of departure. Since most passengers planned their travel in advance, the booking service was in demand, and according to the results of this survey, 17% of respondents always used this service, sometimes—22%, only during mass travel of the population—20%, in exceptional cases—14%, and never—19%.

The results of the processing of information according to the passengers' responses demonstrated their loyalty and commitment to the purchase of electronic travel documents through the online service. In particular, the level of awareness of passengers about the availability of booking, confirmation, and payment of travel documents through the Internet was sufficient: 73% of respondents knew about this service, and 46% of them already used it. A total of 7% of the respondents were partly informed about the service and 13% were not informed, of which 7% indicated that they were not interested in this service at all. At the same time, passengers of the four regional branches had a very high level of awareness: Prydniprovsk (93%), Pivden (88%), Lviv (87%), and Pivdenno-Zakhid (84%) railways; the lowest one was Odeska (49%).

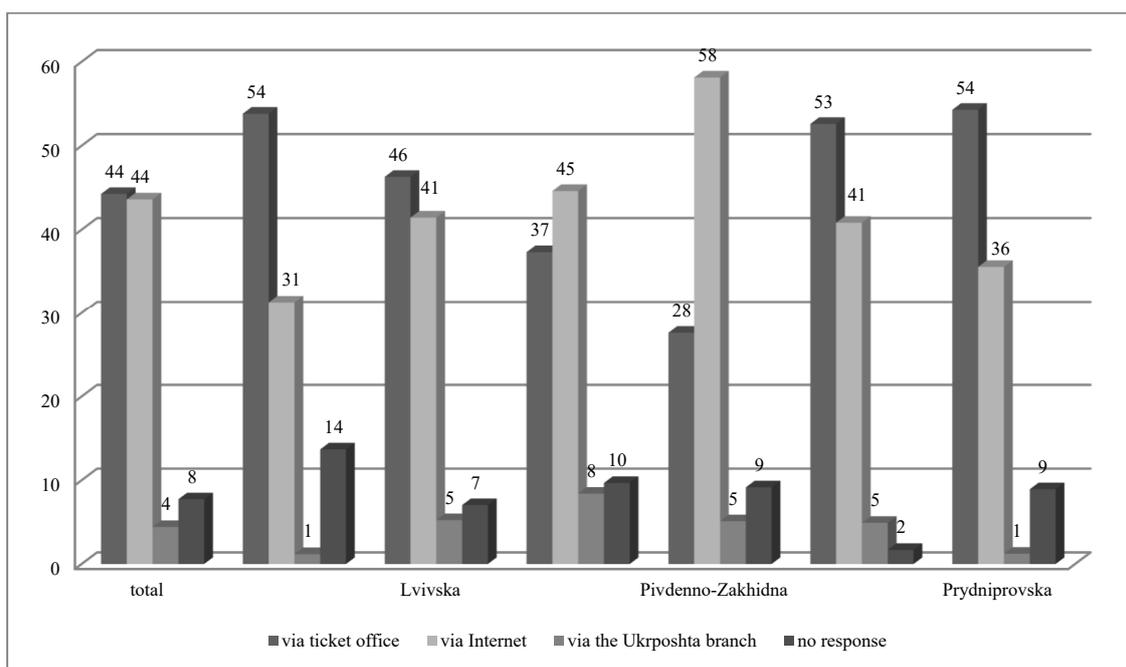
Among the real users of the service this year, 34% of the respondents started to appeal to it for the registration, 32% of the respondents used the Internet to book tickets, and 26% of the respondents paid for tickets online. By the degree of commitment to Internet services, most respondents use it: those who use it from the very beginning of introduction—14%, for several years—18%, more than a year—19%, for several months—17%, those who recently started using this service—13%, and those who used it only once—10%.

As for the convenience of the method of booking and payment of travel documents, 44% of the respondents for various reasons preferred ticket offices (see Figure 3). The main reason for that is the ability to get the necessary information about a trip (27% of respondents) and ease of procedures (21%). A significant portion of respondents (44%) noted the convenience of booking and payment of travel documents via the Internet. The advantages of this method in comparison with cash are traditionally noted: time-saving (30%), the convenience of the procedure (22%), and possibility to purchase a travel document for the desired date (10%). The services of Ukrposhta satisfied only 4% of the respondents who could not apply to the ticket office in advance (28%), or were attracted by the convenience of the procedure (15%) and time-saving (also 15%).

In general, the respondents assessed the organization of the services of reservation, booking, and payment of travel documents in the following way (average weighted scores in points on a five-point scale): via Internet—4.09 points, via a ticket office—3.93 points, and via the Ukrposhta branch—2.96 points. Figure 4 presents the distribution of respondents regarding the method of booking and payment of travel documents that they prefer.



**Figure 3.** Distribution (%) of respondents by advantages in choosing the method of booking and payment of a travel document.



**Figure 4.** Distribution (%) of the preferences of respondents in the method used for booking and payment of travel documents in total and per separate railway.

When choosing a more convenient way of booking, registration, and payment for travel documents, personal characteristics, such as age, occupation, and place of residence, as well as the possibility to use the Internet, were the most common factors considered by the respondents. For instance, Internet access (at home and/or at work) was specified by 93% of the respondents. This segment was steadily increasing, which could be explained by the fact that more and more passengers were using the mobile Internet that makes it possible to be a user of the network regardless of the place of residence, location, household, economic conditions of the population, and other limiting factors. This positive fact undoubtedly contributed to the growth of the user segment.

For the sixth and seventh levels, the forecasting and simulation calculations, their analysis, and forming the conclusions according to the relevant defined models regarding the qualitative and quantitative indicators of the influence of digitalization on the sales activity of JSC “Ukrzaliznytsia” were realized. Therefore, at the eighth level, the parameters of the impact of digitalization on the sales activities of the studied enterprise were determined.

## 5. Discussion

The review of the literature sources on the problem presented in this paper made it possible to conclude that there was a lack of theoretical and practical study of the impact of digitalization on the marketing activities of the enterprises providing services in the field of passenger transportation. This, in turn, limited the comparative analysis of prior periods, and based on them, forming appropriate conclusions about the effectiveness of such impacts.

The research made it possible to evaluate the impact of digitalization on marketing activities from a practical point of view. This, in turn, gave grounds for confirming our hypothesis regarding such an impact. The proposed method of determining the parameters of the impact of the digitalization on the sales activity of the enterprise, which represented a tiered system regarding the influence of the digitalization on the sales activity of the enterprise, made it possible to carry out such an assessment from the stage of the determining the parameters of influence of the digitalization on the sales activity of JSC “Ukrzaliznytsia” (level 0) to the stage of determining such parameters at the eighth level. In particular, the fifth stage involved the application of the expert method for the development of a

complex model of evaluation of the digitalization of sales activity. An expert survey of clients of JSC “Ukrzaliznytsia” showed a significant increase in the segment of railway passengers, who preferred to use the Internet for the booking, processing, and payment of travel documents, considering that one in five passengers could not plan their trips. Furthermore, the number of Internet users continued to grow, both in cities and rural areas, along with their awareness of this service being already high enough, and therefore, the number of passengers with experience of using this service continued to increase. Thus, the electronic method of booking and payment of travel documents over the past year retained the loyalty of passengers and did not lose its attractiveness. The reasons for the increase in loyalty were likely to be the improvement of the technology of the existing procedure and the reduction of the cost of Internet services at the expense of a smaller amount of commission, compared with confirming and purchasing a ticket through the ticket office, and cancelling the fee for using the “e-ticket” service when confirming a travel document through the official website of the enterprise.

The use of linear regression analysis made it possible to build predictive models of the size of electronic travel documents regarding their total numbers for 2019 and 2020. The analysis of the accuracy of the model developed was based on the use of the ex-post forecast for 2011–2018. Their forecast values are 55.57% for 2019 and 63% for 2020.

## 6. Conclusions

This study conducted theoretical and applied research that allowed for confirming the hypothesis concerning the influence of digitalization on the marketing activity of an enterprise in the sphere of the sale of services. According to the results of the research on the problem of digitalization of marketing activity of an enterprise: (1) a categorical and conceptual apparatus of the term “digitalization of electronic rail ticket sales services” was developed as a transformation and improvement of the use of digital technologies to develop and expand the business process channels related to the sale and accounting of electronic travel documents of the enterprise through various online services and media channels; (2) a method for determining the parameters of the impact of digitalization on the sales activity of the enterprise in the form of a comparative system for evaluating the impact of digitization on the marketing activity of the enterprise was proposed. Its practical application was carried out using the example of JSC “Ukrzaliznytsia.” In particular, the results of such an impact on the example of the sale of electronic transport documents was demonstrated in the dynamic and strategic perspectives for railway undertakings. The emphasis was placed on innovative sales channels that emerged as a result of digitalization processes. The differentiation of sales channels through the implementation of various online IT services was demonstrated, which helps enterprises to increase their customer base by expanding the potential audience of consumers (including foreign countries), and reducing the cost of issuing and printing tickets and time to purchase them.

In the future, it would be advisable to specify the impact of each of the distribution channels on the results of sales activities of the enterprise and the effectiveness of the widespread adoption of digital technologies in other areas of marketing activities. In particular, the following recommendations are offered for improving the digitalization of services for the sale of electronic travel documents and their accounting in an enterprise: to develop their strategies and tactics to take into account the dynamics of development of digitalization technologies with subsequent application in the construction of business models; to ensure constant monitoring of inquiries and demand for the most demanded routes of passengers; to develop and analyze statistics on the number of electronic tickets issued through various online services and distribution channels; to engage specialists (SMM managers); to actively introduce mobile applications of the enterprise website in social networks, i.e., Facebook and Instagram; to attract additional agents for the sale of electronic tickets in order to expand their network; and to promote online ticket sales services through mobile applications and social networks.

The further development of the sale of electronic travel documents and the digitalization of other services for passengers, in our opinion, should be carried out in compliance with the principle of customer service desegmentation.

The level of development of digitalization in the country as a whole and of each enterprise, in particular, makes it impossible to ensure fast digitalization rates at the macro-, meso-, and micro-levels, which are the research limitations. Also, the research on this problem requires the formation of an information base, including specific and reliable statistical data, which limits its application to other enterprises.

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