

POSTAL SERVICES IMPROVEMENTS IN BOSNIA AND HERZEGOVINA THROUGH USERS' PERSPECTIVE: A COMPREHENSIVE SURVEY ANALYSIS

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Abstract: *The research focuses on analyzing the satisfaction and needs of postal service users in Bosnia and Herzegovina. The aim of the study, which was conducted for the first time in Bosnia and Herzegovina, was to collect data on the use of postal services, customer satisfaction, and their specific needs, including cross-border shipments. The research was conducted through field and online surveys, using a representative sample of 1,008 respondents. The results show a high level of satisfaction with the proximity of post offices and the friendliness of delivery personnel, while users were least satisfied with the use of information technology and the resolution of complaints. These findings will be used to improve postal services and better adapt them to customer needs. The research results were presented at the "Standardization and Quality in Postal Traffic" conference.*

Keywords: *Postal Traffic, Customer Satisfaction, E-commerce, Bosnia and Herzegovina*

1. Introduction

The postal sector in Bosnia and Herzegovina has been operating for many years, facing challenges directly related to modern market demands and the digitalization of services. A particularly challenging aspect is the existence of three public postal operators that exchange mail among themselves, which, according to the Postal Law of Bosnia and Herzegovina, is defined as inter-operator traffic and is treated as internal postal traffic.

In a rapidly changing world, the efficiency of postal services becomes crucial in meeting the needs of an increasing number of users, especially in the context of the growth of e-commerce and market globalization. Moreover, postal services are an essential part of the communication infrastructure, bridging the digital divide in rural areas. The development of these services in Bosnia and Herzegovina has not kept pace

with the progress achieved by countries in the region, such as Croatia and Serbia [1], [2], which have been conducting regular user satisfaction surveys for many years. These surveys provide data on user needs and preferences, enabling service adaptation to the market and improving quality. For example, Croatian Post, through regular user surveys, has achieved high standards in the digitalization of its services, reducing delivery times, and increasing customer satisfaction [3]. Similarly, Post of Serbia has introduced a range of innovative services based on feedback obtained through similar surveys.

In Bosnia and Herzegovina, this user satisfaction survey in the postal services sector is the first of its kind, making it extremely important for the future development of this sector. Through a survey that included a wide range of users, data were collected on satisfaction with current services as well as unmet user needs. The data obtained from this survey will enable the improvement of postal services in line with market needs, thereby increasing customer satisfaction and enhancing operational efficiency.

Countries in the region have been working for years to align their postal services with the demands of the European Union through regular surveys that analyze user experience, customer needs, and the efficiency of the system itself. The examples of Croatia and Serbia demonstrate how continuous market analysis allows postal systems not only to remain competitive but also to provide high-quality services that meet modern demands.

The Postal Agency of Bosnia and Herzegovina conducted this type of research for the first time [4]. Bosnia and Herzegovina now has the opportunity to use the results of this pioneering research to lay a solid foundation for further development of the postal system, making it more efficient, modern, and better prepared for future challenges.

2. Methodology

The user satisfaction survey of postal services in Bosnia and Herzegovina was conducted using a combination of quantitative and qualitative methods. A survey was used as the primary data collection method, covering a representative sample of 1,008 respondents. The respondents were randomly selected from different parts of the country to ensure representation of postal service users from both urban and rural areas.

Data were collected through surveys available in two formats: face-to-face field surveys and online surveys [5]. The survey questionnaire included a series of questions addressing various aspects of user satisfaction, including the quality of postal services, the use of information technology, the friendliness of couriers, and delivery time. The questions were structured in the form of a Likert scale [6], where respondents rated different service elements on a scale from 1 to 5, with 1 indicating "very dissatisfied" and 5 "very satisfied."

The survey was conducted on a representative sample that included different demographic categories of users, such as various age groups, gender, education, and geographic location. Special focus was placed on including users from remote and rural areas to examine the specific challenges and needs related to postal services in these communities.

After data collection, the survey results were analyzed using descriptive statistical methods [7] to determine the average levels of user satisfaction with various

service aspects. Comparative analyses were also used to compare satisfaction across different demographic groups and to identify key areas for service improvement.

3. Results

3.1. Demographic Data of Respondents

The survey consists of a total of 18 questions and is divided into two parts. The first part of the questionnaire covers general information about the respondents, such as gender, age, employment status, place of residence, and the provider of universal postal services in the respondent's area. The second part of the questions relates to the use, satisfaction rating, and needs of postal service users.

In the first part of the research, the analysis focused on gender structure, age groups, employment status, type of settlement, and the provider of universal postal services in the respondents' places of residence. The sample was slightly skewed toward female respondents, with 56% women compared to 44% men, indicating greater engagement of women in the survey. This also reflects their more active role in using postal services and greater interest in participating in surveys. The majority of respondents fall within the younger and middle age groups (18-49 years), accounting for more than 79% of the sample. This demographic group tends to use digital channels and has higher expectations regarding the modernization and digitalization of postal services.

A significant number of respondents are employed (over 600 respondents), indicating the need for faster and more efficient postal services due to limited free time. Employed users prefer services that allow for more flexible planning of daily activities. Additionally, most respondents come from urban areas (over 79%), where postal services are more accessible compared to rural areas. Statistics from other neighboring countries show similar trends, indicating that postal services in urban areas are more accessible and better developed.

Bosnia and Herzegovina has a uniquely structured market with three public postal operators, each covering a specific geographic region of the country. The majority of respondents use the services of BH Pošta—559 respondents, or 55%. HP Mostar serves 145 respondents, or 14%, while Pošte Srpske serves 304 respondents, or 30%.

3.2. User Satisfaction

The second part of the survey questionnaire relates to the use, satisfaction ratings, and needs of users of postal services in Bosnia and Herzegovina. The questions focus on the frequency of using postal services, the level of user satisfaction with various aspects of postal services, and the identification of specific needs that users have with both public and private postal operators. The results of this part of the research provide a deeper insight into users' experiences and expectations, allowing for a better understanding of how postal services can be improved and tailored to meet user needs.

The results for the question: "How many postal items do you receive on average per month?" are presented in the following figure.

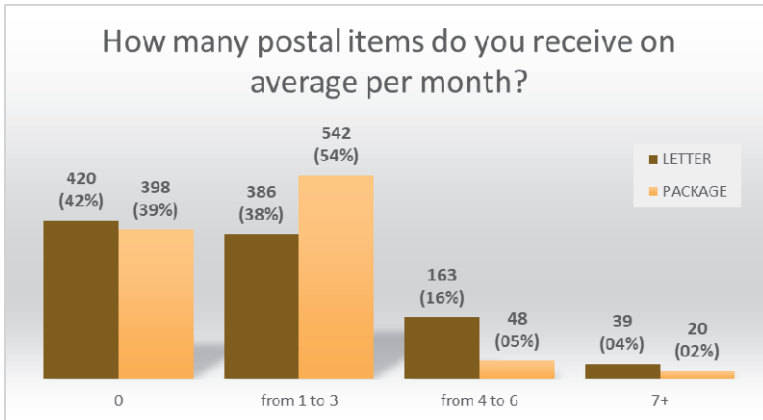


Figure 1. The average number of postal items received by users per month

Most respondents receive 1-3 postal items per month, which indicates moderate activity in using postal services. Additionally, there is a noticeable higher frequency of using parcel services compared to letter mail, which aligns with trends in countries with developed postal services. This may be related to both personal and business needs of the users. Notably, 42% of respondents do not use letter delivery services, and 39% do not use parcel delivery services. The youngest respondents (18-29 years) are the most likely to not receive any parcels or letters during the month. Furthermore, this age group is the most represented in the category of 1 to 3 received postal items per month, with 21% for parcels and 11% for letters.

The results for the question regarding how often, on average, respondents use the services of: sending letters, sending parcels, and financial services per month are presented in the following figure.

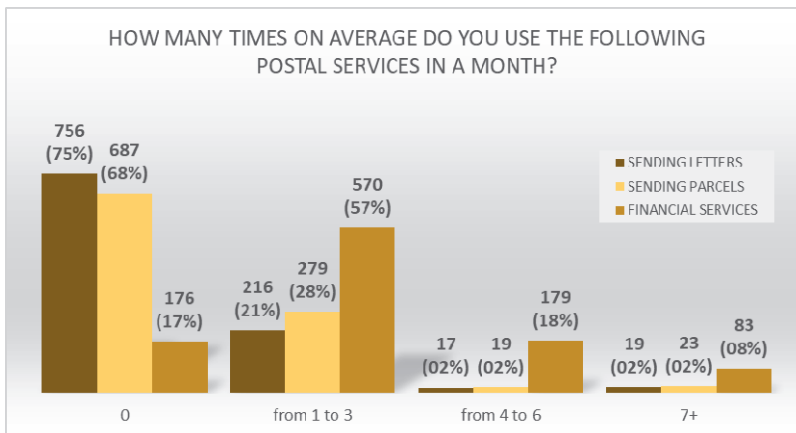


Figure 2. Display of results for the usage of postal services (sending parcels, sending letters, and financial services)

The results show that the vast majority of respondents rarely use postal services during a single month. Specifically, 75% of respondents did not send a single letter, while 68% did not send any parcels. Similarly, 17% of respondents did not use financial services through the post. Among occasional users, 176 respondents used the letter-sending service 1 to 3 times a month, while 28% used the parcel-sending service within the same range. Financial services were more frequently used in this segment, with 57% of respondents using 1 to 3 services per month. A very small percentage of regular users utilized services 4 to 6 times a month. In this segment, the majority comes from financial services, accounting for 17%. A very small percentage represents the most intensive users, who use postal services 7 or more times a month. The data indicate that most respondents use postal services sporadically, with a significantly larger proportion of occasional users for financial services compared to letter and parcel sending.

Analyzing age in relation to postal service usage, it is clear that the largest number of respondents who do not send letters comes from the 18-29 age group (28%), followed by the 30-39 age group (16%) and the 40-49 age group (13.4%). Occasional parcel sending (1 to 3 times a month) is most common in the 30-39 age group (8.5%). Sending parcels more than 7 times a month is rare, with the smallest number of respondents being from older age groups.

The largest number of respondents who do not use financial services comes from the 18-29 age group (6.7%), followed by the 30-39 age group (3.4%) and the 40-49 age group (4%). On the other hand, the largest number of respondents who use financial services comes from the 18-29 age group (20.8%), followed by the 30-39 age group (14.1%) and the 40-49 age group (10.6%).

The following questions focused on the level of satisfaction with the characteristics of services provided by public postal operators and other postal operators—courier services. Respondents rated the following characteristics through a Likert scale survey:

- Meeting delivery deadlines
- Simplicity of procedures
- Service price
- Parcel tracking options
- Communication regarding parcel status
- Handling of complaints and claims
- Use of information technology
- Couriers' friendliness and helpfulness

For each of the above sub-questions, respondents expressed their opinions using a five-point Likert scale, where 1 indicated "NOT AT ALL SATISFIED," 2 "MOSTLY DISSATISFIED," 3 "NEITHER SATISFIED NOR DISSATISFIED," 4 "MOSTLY SATISFIED," and 5 "COMPLETELY SATISFIED." The results for the question regarding the rating of satisfaction levels with the characteristics of services provided by public postal operators are presented in the figure below.

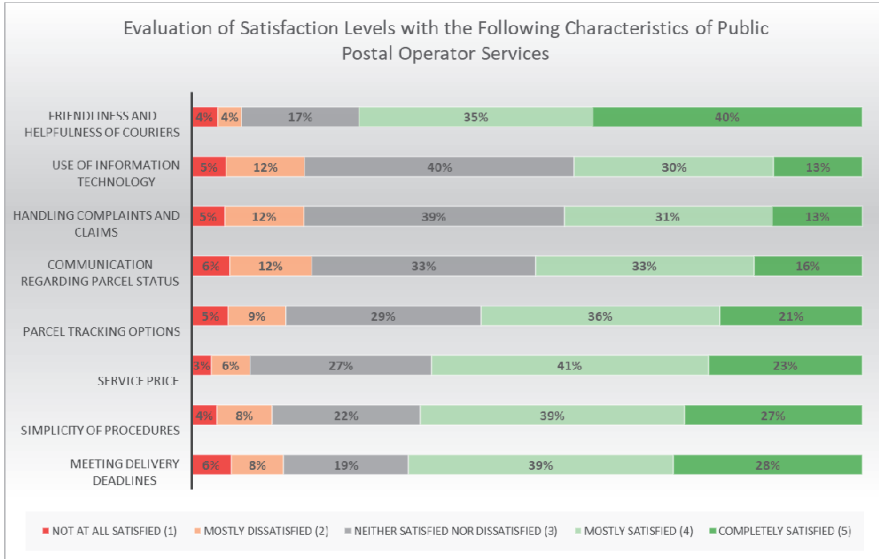


Figure 3. Evaluation of satisfaction levels with the characteristics of public postal operators' services

The previous results and analyses indicate that respondents are generally satisfied with the services of public postal operators. The highest satisfaction was expressed with the friendliness and helpfulness of couriers, with an average rating of 4.03. The simplicity of procedures was also rated highly, with an average score of 3.77. On the other hand, areas that require improvement include the use of information technology, with an average rating of 3.34, handling of complaints and claims, with an average rating of 3.36, and communication regarding the status of parcels, with an average rating of 3.41.

The results for the question about the evaluation of satisfaction levels with the characteristics of services provided by other postal operators – courier services – are presented in Figure 4 below.

The previous results indicate that respondents are generally satisfied with courier services, with the highest satisfaction expressed for the couriers' friendliness and the simplicity of procedures, while the service price represents an area with lower satisfaction. Given the large sample size (N=1008), the mean values and standard deviations, which align with expectations for a Likert scale, show that the results are statistically acceptable. Moreover, the large sample size and small standard errors indicate the reliability of the results. The standard deviations show that there is variability in respondents' ratings, reflecting a variety of perspectives. All these characteristics demonstrate that the data was well-collected and analyzed, and that the results are statistically valid for further interpretation and conclusion-making.

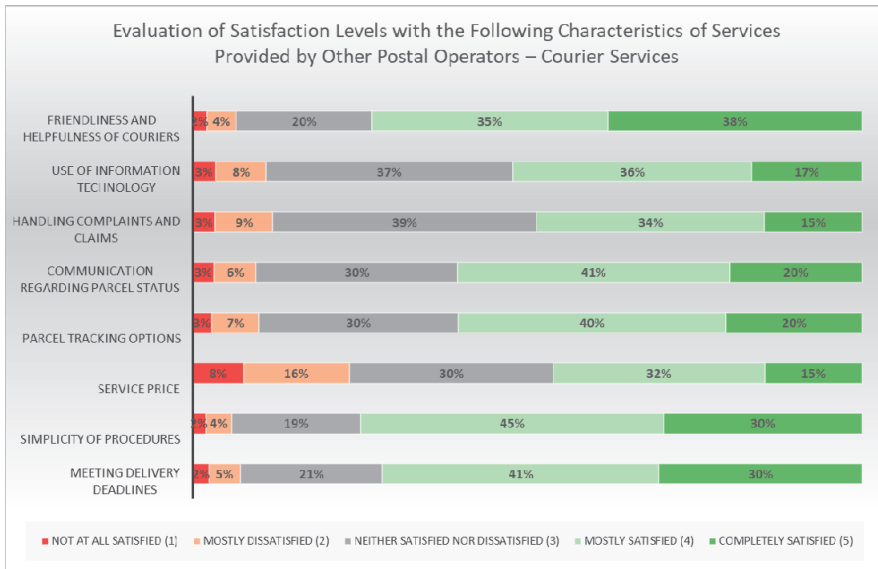


Figure 4. Evaluation of Satisfaction Levels with the Characteristics of Services Provided by Other Postal Operators – Courier Services

Table 1 below provides an overview of the satisfaction ratings based on the five-point Likert scale for the questions on satisfaction levels with the characteristics of services provided by public postal operators and other postal operators – courier services.

Table 1: Results of satisfaction ratings for public postal operators and courier services

Characteristic/Statistical Values	Public Postal Operators	Other Postal Operators – Courier Services
Meeting Delivery Deadlines	3.7629	3.9236
Simplicity of Procedures	3.7688	3.9673
Service Price	3.755	3.2966
Parcel Tracking Options	3.5863	3.6786
Communication Regarding Parcel Status	3.4137	3.6746
Handling Complaints and Claims	3.3631	3.4792
Use of Information Technology	3.3413	3.5427
Friendliness and Helpfulness of Couriers	4.0397	4.0248

The next question directed to the respondents was related to e-commerce. The question was: Do you purchase goods online (e-commerce)? The results for this question are shown in the following graph.

Survey results indicate that out of a total of 1008 respondents, 809 (80.7%) regularly purchase goods online, while 199 (19.7%) do not. These data provide insight into the significant prevalence of e-commerce among respondents.

In comparison with other countries in the region, these results indicate similar rates of online shopping, suggesting a broad adoption of digital technologies for shopping in Bosnia and Herzegovina.

Table 2. E-Commerce usage by age group

DO YOU PURCHASE GOODS ONLINE (E-COMMERCE)?	AGE GROUP				
	18-29	30-39	40-49	50-59	60 and more
Yes	29.1%	20.4%	17.7%	11.1%	2.0%
No	5.2%	2.1%	4.4%	5.1%	3.1%

Table 3. Operators delivering purchased goods via the internet by age group

WHO MORE OFTEN DELIVERS THE GOODS YOU PURCHASED ONLINE?	AGE GROUP				
	18-29	30-39	40-49	50-59	60 +
Public postal operators (Pošte Srpske, BH Pošta, HP Mostar)	13.0%	5.3%	8.4%	4.8%	1.3%
Other postal operators (courier services)	19.6%	16.3%	12.3%	7.9%	1.6%

Respondents more frequently report that goods purchased online are delivered by other postal operators (582 respondents, representing 63.5%), while a smaller number of respondents prefer public postal operators such as Pošte Srpske, BH Pošta, and HP Mostar (330 respondents, or 36.4%).

4. Conclusion

Continuous research allows for tracking user satisfaction, identifying trends, and recognizing the specific needs of different demographic and socio-economic groups. Therefore, it is essential that this research continues in the coming years to consistently monitor trends, needs, and behaviors of postal service users.

This research provides important information and insights into the postal service market in Bosnia and Herzegovina, laying the groundwork for future planning and the development of services that will meet users' needs and improve the quality of postal services in the country. Regularly conducting such research and implementing the recommended measures will be crucial for the continuous progress and adaptation of postal services to the rapid changes in technology and customer expectations.

Establishing a web platform dedicated to continuous research of the postal services market in Bosnia and Herzegovina could significantly enhance the data collection process. The platform should be user-friendly, allowing users to easily access surveys and provide feedback. The site should offer information about the goals of the research, the protection of data privacy, and the results of previous surveys so that users can see concrete changes resulting from their participation.

Postal operators need to continuously monitor global trends and innovations in the postal sector to be able to implement the latest solutions and technologies in a timely manner, improving their services.

Conducting educational campaigns for users from all population groups on the benefits and security of digital services could increase their acceptance and trust in these technologies. Establishing a central registry for complaints would enhance consumer protection.

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**POBOLJŠANJA USLUGA POŠTANSKOG SAOBRAĆAJA
U BOSNI I HERCEGOVINI KROZ PERSPEKTIVU
KORISNIKA: SVEOBUH VATNA ANALIZA ANKETE**
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