

Supplementary Services as a Differentiation Strategy in Urban public Transportation: A Comparative Analysis of Public and Private Transport Operators in Batna City

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Abstract:

This study investigates supplementary services in urban public transportation, focusing on public and private operators in Batna City. It aims to assess the current state of supplementary services offered by both sectors, evaluate their effectiveness in enhancing customer satisfaction and loyalty, and identify potential improvements to foster competitiveness. A mixed-methods approach, including surveys and comparative analysis, is employed to gather insights into the service offerings, customer perceptions, and areas for enhancement. The findings reveal that public operators generally provide a broader range of supplementary services, which significantly contribute to customer satisfaction, while private operators lag behind in these areas. Despite this, both sectors share challenges in information provision, security, and payment systems. The study offers actionable recommendations for policymakers and transport operators, emphasizing the need for strategic improvements to ensure competitive advantage and improve service quality.

Keywords: Supplementary services, differentiation strategy, urban transportation, public and private operators.

JEL Classification Codes: L91; M31; D83

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1. INTRODUCTION

Urban public transportation systems are essential for ensuring mobility, economic growth, and social cohesion in modern cities (Nawazish Ali, Ahmadi, Moradiamani, & Jalili, 2024). However, with the increasing demand for more efficient, customer-centric services, transportation operators face the challenge of distinguishing themselves in a competitive market (Iffan, 2019). Traditional transportation metrics, such as punctuality, affordability, and coverage, are no longer sufficient to meet the rising expectations of urban commuters (Henao, et al., 2022). Consequently, supplementary services which are defined as additional, value-adding offerings that enhance the customer experience have emerged as a key differentiation strategy (Zheng, Garrick, Atkinson-Palombo, McCahill, & Marshall, 2013).

Supplementary services, such as Wi-Fi connectivity, real-time tracking, loyalty programs, and improved accessibility for vulnerable populations, are transforming the way urban transportation providers engage with their customers. These services not only improve passenger satisfaction but also foster long-term loyalty, contributing to the competitive positioning of operators in a dynamic environment (Naipaul & Parsa, 2000). While private transport operators often adopt innovative supplementary services to attract a larger customer base, public transport enterprises face unique challenges, including limited budgets and bureaucratic constraints, that can impede the adoption of similar strategies.

1.1 Problem Statement and Research Questions

The urban public transportation network in Batna City is characterized by the coexistence of public and private operators, creating a unique context to explore the role of supplementary services in service differentiation. Despite their potential to enhance customer satisfaction and loyalty, the adoption and effectiveness of these services remain uneven between the two sectors. To guide this study, the following research questions are posed:

- What is the current state of supplementary services offered by public and private operators in Batna City?
- How do customer perceptions of service quality differ between these operators?
- To what extent are supplementary services effective in differentiating urban transportation services in Batna City?
- What strategies can enhance the adoption and impact of supplementary services in the public transportation sector?

1.2 Research Objectives

This research aims to explore the role of supplementary services as a differentiation strategy in urban public transportation, with a particular focus on public and private operators in Batna City. The study seeks to assess the current state of supplementary services offered by these operators, compare customer perceptions of service quality between the two sectors, and evaluate the impact of these services on customer satisfaction and loyalty. Practical recommendations will also be developed to enhance the adoption and effectiveness of supplementary services, particularly in addressing the challenges faced by public transportation providers.

A comprehensive methodological framework, including surveys and comparative analysis, supports the study. The findings aim to provide actionable insights for policymakers

and transportation operators, highlighting the need to align service offerings with public expectations. These contributions are intended to strengthen the competitiveness and customer focus of the urban transportation system in Batna City.

2. LITERATURE REVIEW

Supplementary services have become a key strategy for differentiating urban transportation operators in a competitive market. As passenger expectations evolve, the need for value-added services beyond basic mobility has increased. This literature review explores the role of supplementary services in enhancing customer satisfaction, service quality, and competitive advantage in urban transportation. It also examines key theoretical frameworks that guide the implementation of these services and their impact on both public and private operators.

2.1 Concept of Supplementary Services in Urban Transportation

Supplementary services refer to the additional offerings that enhance the core service of a transportation system, aiming to improve the overall customer experience (Rydback, 2022). In the context of urban transportation, these services go beyond basic transit functions such as mobility and timeliness, addressing the needs and expectations of passengers for convenience, comfort, and added value (Dragu, 2013). These services are not essential for the fundamental operation of the transport system but play a crucial role in differentiating one provider from another and fostering customer loyalty (Naipaul & Parsa, 2000).

Urban transportation systems increasingly depend on supplementary services to remain competitive in a dynamic market where passenger satisfaction is paramount (Yanming, Guo, Zhao, & Ma, 2022). These services are categorized into eight groups (Etzel, 2015): Information, Order-taking, Safety-keeping, Hospitality, Exceptions, Billing, Payment, and Consultation. Information services offer real-time tracking, mobile apps for route updates, and delay notifications, while comfort-oriented services include Wi-Fi, air conditioning, and priority seating. Accessibility services, such as ramps and audible signals, ensure inclusivity, meeting the needs of all passengers, including those with disabilities. Supplementary services enhance core transportation offerings, acting as key differentiators between public and private operators. These services improve accessibility, comfort, and overall customer care, contributing significantly to passenger satisfaction and loyalty. As these services evolve, they increasingly shape a competitive urban transportation landscape (Frow, Ngo, & Payne, 2013).

The concept of supplementary services in urban transportation aligns with service marketing theory, which highlights the importance of value-added features in enhancing the customer experience. According to Zeithaml et al. (1985), supplementary services are crucial for differentiating service providers, providing a competitive edge in markets with similar basic services (Naipaul & Parsa, 2000). This differentiation is vital in urban transportation, where mobility is often seen as a basic necessity, and supplementary services help operators improve their reputation and foster customer loyalty. While private operators typically lead in introducing innovative supplementary services due to greater flexibility and resources, public transportation providers are increasingly adopting these strategies as well. The integration of supplementary services has become a strategic tool for enhancing the perceived quality of urban transportation and strengthening the relationship between operators and passengers (Cirianni, Leonardi, & Iannò, 2021).

2.2 Differentiation Strategies in Public Transportation

In the competitive landscape of urban transportation, differentiation strategies are crucial for operators seeking to enhance their market position and attract and retain customers. Differentiation refers to the process by which a service provider distinguishes itself from its competitors by offering unique or superior attributes that meet the specific needs of its target market (Wei, 2008). In the context of public transportation, differentiation strategies focus on enhancing the value perceived by passengers, improving service quality, and fostering customer loyalty (Ibrahim & Borhan, 2020).

Traditionally, public transportation systems have competed primarily on price, accessibility, and reliability. However, as urban mobility becomes more dynamic and customer expectations evolve, public transport operators are increasingly adopting supplementary services as a means of differentiation (Kim, Kim, Jang, & Kim, 2021). These services, such as real-time tracking, mobile applications, comfort enhancements, and customer support, are used to create a more personalized and enjoyable experience for passengers. These strategies aim to build stronger connections with commuters, beyond the basic function of transportation.

Several models of differentiation are employed in public transportation, including service innovation, quality improvement, and customer experience management (Havíř, 2019). Service innovation focuses on introducing new services or upgrading existing ones to meet emerging needs. For instance, offering Wi-Fi on buses or implementing smart ticketing systems can set an operator apart. Quality improvement strategies involve enhancing service reliability, safety, and punctuality, which are foundational expectations for any public transport system. Lastly, customer experience management involves understanding passenger preferences and customizing services to match these needs, fostering a sense of loyalty.

While public operators may face constraints, such as limited budgets and bureaucracy, they can still leverage differentiation strategies by focusing on specific customer needs or adopting low-cost innovations. Private operators, on the other hand, often have more flexibility to experiment with advanced technologies and amenities. Despite these differences, both sectors recognize the importance of differentiation in ensuring long-term sustainability and customer satisfaction in urban transportation markets.

2.3 Theoretical Framework and Key Models

The study of supplementary services and differentiation strategies in urban transportation is underpinned by several theoretical frameworks that highlight the role of service quality, customer satisfaction, and competitive advantage. These frameworks provide a foundation for understanding how public and private transportation operators can leverage supplementary services to enhance their market position and meet customer expectations.

One of the most prominent theories in service management is SERVQUAL, developed by Parasuraman, Zeithaml, and Berry (1988). SERVQUAL is a multi-dimensional model that measures service quality by evaluating the gap between customer expectations and perceptions across five dimensions: tangibles, reliability, responsiveness, assurance, and empathy (Tamanna, 2020). In the context of urban transportation, supplementary services such as real-time tracking, customer support, and onboard amenities can be assessed using SERVQUAL to determine their impact on perceived service quality. This model emphasizes that service providers must address both functional and emotional needs of customers to create a competitive advantage (Miao,

Barone, Qian, & Humphrey, 2019).

Another key framework is the Service-Dominant Logic (SDL), proposed by Vargo and Lusch (2004). SDL suggests that value is co-created between the service provider and the customer, rather than being delivered by the provider alone (Vargo & Lusch, 2008). This perspective is particularly relevant to supplementary services in urban transportation, where customer engagement plays a crucial role in shaping the overall experience. For example, passenger feedback on comfort or the availability of specific amenities can directly influence the development and refinement of supplementary services.

Additionally, the Porter's Generic Strategies model (1985) provides a strategic perspective on differentiation in competitive markets. According to Porter, companies can pursue three generic strategies (cost leadership, differentiation, and focus) to achieve a competitive advantage (Tanwar, 2013). In public transportation, differentiation through supplementary services aligns with Porter's differentiation strategy, enabling operators to distinguish themselves from competitors by offering unique and valued services that appeal to specific customer segments.

These theoretical frameworks and models offer valuable insights into the mechanisms by which supplementary services contribute to differentiation in urban transportation, guiding both the development and evaluation of these strategies.

3. METHODOLOGY

This section details a comparative study on supplementary services as a differentiation strategy in Batna City's urban transport. A questionnaire was used to gather data from 400 respondents, analysed with SPSS to assess customer perceptions and experiences.

3.1 Research Design, Population, and Sampling

This study adopts a comparative research design to examine the role of supplementary services as a differentiation strategy in urban transportation. The research focuses on both public and private transportation operators in Batna City, offering a balanced analysis of their approaches to supplementary services.

The study population comprises passengers who regularly use public and private transportation services in Batna City. Due to practical constraints, the sample was selected using a non-probability sampling approach, specifically a convenience sampling method. Individuals encountered during the field study were surveyed, ensuring a diverse representation of user experiences. The sample includes 400 respondents, with 200 users of public transportation and 200 users of private operators. Key demographic factors, such as age and gender, were considered to provide a comprehensive understanding of customer perceptions.

This approach lays a solid foundation for comparing the effectiveness of supplementary services and their role in differentiation within the urban transportation system.

3.2 Data Collection Instrument

This study employed a structured questionnaire to explore the role of supplementary services in differentiating public and private transportation in Batna City. It collected both quantitative and qualitative data for a comprehensive view of customer perceptions and experiences. The questionnaire had three sections: demographics (age, gender, transport use frequency), perceptions of supplementary services (comfort, accessibility, information), and

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overall satisfaction and loyalty. A pre-test with a small sample ensured clarity and reliability, with revisions made before the field study.

3.3 Procedures for Data Collection and Analysis

Data collection took place over three weeks in May 2024, focusing on key urban locations within Batna City. The target population included passengers who regularly use public and private transportation services. Respondents were engaged at bus stops, transit hubs, and other high-traffic areas, where a structured questionnaire was administered through face-to-face interviews. This method facilitated high response rates and allowed interviewers to clarify questions when necessary, ensuring the reliability of the responses.

The collected data was systematically organized and coded for analysis using SPSS software. Descriptive statistics, including means and frequencies, were employed to summarize respondents' demographic profiles and general perceptions of the services. To explore the relationship between supplementary services and customer satisfaction, correlation analysis was conducted. The findings provided valuable insights into the role of supplementary services in enhancing differentiation strategies within urban public transportation.

4. ANALYSIS AND FINDINGS

This section analyses the data on transportation services in Batna City, covering respondent profiles, supplementary services, service quality perceptions, and the effectiveness of supplementary services as a differentiation strategy, providing key insights for sector improvements.

4.1 Profile of the Respondents

The demographic profile of respondents provides insights into the characteristics of passengers using public and private transportation services in Batna. Table 1 summarizes key demographic factors, including age, gender, and frequency of usage. This information forms the basis for analysing relationships between supplementary services, customer perceptions, and satisfaction levels.

Table 1. Demographic profile of respondents

| Demographic Factor | | Public Transport Users | Private Transport Users | Total |
|--------------------|--------------|------------------------|-------------------------|-------|
| Age | < 25 years | 35% | 40% | 37.5% |
| | 25-39 years | 40% | 35% | 37.5% |
| | 40+ years | 25% | 25% | 25% |
| Gender | Male | 60% | 55% | 57.5% |
| | Female | 40% | 45% | 42.5% |
| Frequency of Use | Daily | 50% | 55% | 52.5% |
| | Weekly | 30% | 25% | 27.5% |
| | Occasionally | 20% | 20% | 20% |

Source: Survey data

The sample is well-distributed in terms of age, with the majority of respondents falling within the 25-39 age group, reflecting the active urban workforce. Gender representation is balanced, with a slight male majority in both public and private transportation user groups. Additionally,

a significant portion of respondents use transportation daily, highlighting the importance of regular transportation services in Batna City. This demographic breakdown is essential for understanding the diversity of perspectives and experiences among transportation users in the city.

4.2 Current State of Supplementary Services

The findings in Table 2 reveal notable differences in the availability and approval of supplementary services between public and private transportation in Batna City. These services, designed to enhance the passenger experience, show contrasting levels of implementation and user satisfaction across both sectors.

Table 2. Availability and approval of supplementary services

| | Supplementary Service | Public Operators | Private Operators |
|---|--|-------------------------|--------------------------|
| Information Services | Route maps and schedules on bus stops and vehicles | 0% | 0% |
| | Mobile apps for route planning, live tracking, fare info | 36% | 0% |
| | Notifications on delays/service changes (via apps/SMS) | 0% | 0% |
| Protection of Passenger Property | CCTV surveillance on buses and at bus stops | 0% | 0% |
| | Lost and found services for items left on buses | 4% | 0% |
| Hospitality Services | Air-conditioned buses or heating services | 68% | 5% |
| | Wi-Fi and charging stations available on buses | 0% | 0% |
| | Comfortable seating with ergonomic designs | 83% | 27% |
| Exceptions Services | Special assistance for passengers with disabilities | 92% | 16% |
| | Priority seating for elderly, pregnant women, or families | 24% | 9% |
| Billing Services | Digital billing for travel and automatic receipts | 0% | 0% |
| | Subscription services for regular passengers | 0% | 0% |
| | Prepaid travel cards offering discounts and faster boarding | 0% | 0% |
| Payment Services | Discounts for children, seniors, or students ...etc. via payment systems | 0% | 0% |
| Consulting Services | Information desks at bus terminals | 0% | 0% |
| | Customer service via mobile app, email, or phone | 0% | 0% |
| | Travel advisory for passengers (alternate routes, delays) | 0% | 0% |

Source: Survey data

In terms of Information Services, public transportation falls behind in offering key digital services. Only 36% of public transport users have access to mobile applications for route planning and live tracking, while private transportation provides no such service. Moreover, both sectors lack notifications for delays or service changes, highlighting a gap in real-time communication with passengers. This represents a significant opportunity for improvement in public transport, where digital tools could greatly enhance the user experience.

Regarding Protection of Passenger Property, both transportation modes show minimal provision of CCTV surveillance and lost-and-found services, with private transportation offering none. Public transportation offers only 4% availability of lost-and-found services, suggesting that both sectors must prioritize passenger security and property protection.

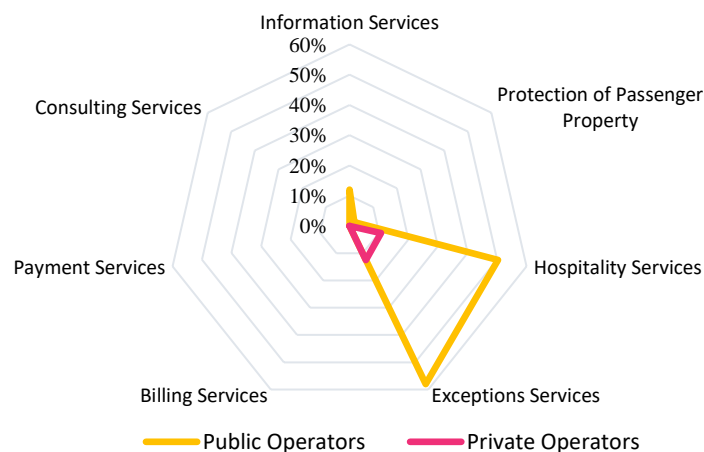
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Hospitality Services show more favourable results, particularly in public transportation. Air-conditioned buses are available to 68% of public transport users, a feature virtually absent in private transportation, where only 5% of users benefit from it. Additionally, comfortable seating with ergonomic designs is more prevalent in public transport (83%) compared to private transport (27%), emphasizing the importance of passenger comfort in the public sector. However, Wi-Fi and charging stations are absent in both sectors, indicating an area where improvements could be made in both public and private transport.

In terms of Exceptions Services, public transportation excels, particularly in offering special assistance for passengers with disabilities, with 92% of respondents reporting availability. This service is less common in private transportation (16%), pointing to a lack of inclusivity in the private sector. Similarly, priority seating for elderly passengers, pregnant women, and families is more common in public transport (24%) than in private transport (9%).

Billing and Payment Services are virtually non-existent in both sectors. Digital billing, subscription services, prepaid travel cards, and discounts for special groups are unavailable, pointing to a lack of innovation in payment systems that could enhance convenience and accessibility for regular passengers.

Fig.1. Comparative overview of supplementary service availability



Source: Survey data

In summary, Figure 1 underscores notable disparities in the availability of supplementary services between public and private transportation operators, with public operators generally outperforming their private counterparts. Public transportation shows moderate strengths in Hospitality Services (50.33%) and Exceptions Services (58%), which include features like air-conditioned buses and special assistance for passengers with disabilities. In contrast, private operators lag significantly, with only 10.66% satisfaction for hospitality and 12.50% for exception services. These results suggest that public operators have made greater efforts to enhance passenger comfort and inclusivity, though there remains considerable room for improvement in both sectors.

Critical weaknesses are evident across other service categories. Information Services are limited, with public operators scoring only 12% and private operators providing none. Protection of Passenger Property is similarly underdeveloped, with just 2% availability in public transportation and none in private. Alarming, Billing, Payment, and Consulting

Services are entirely absent in both sectors, reflecting a lack of innovation and modernization. These deficiencies highlight the need for significant enhancements across all service dimensions to better meet passenger expectations and align with contemporary standards in transportation services.

4.3 Comparison of Service Quality Perceptions

To evaluate the quality of transportation services in Batna City, respondents were asked to rate public and private transportation across eight dimensions of service quality: Service Offering, Accessibility, Information, Time, Customer Care, Comfort, Security, and Environment. Table 3 presents the percentage of respondents who expressed satisfaction with each dimension for public and private transportation. The results show notable differences in performance across various dimensions, reflecting strengths and weaknesses in each sector.

Table 3. Comparison of service quality perceptions by indicators

| Dimension | Indicator | Public Operators | Private Operators |
|-------------------------|-----------------------------------|------------------|-------------------|
| Service Offering | Availability of routes | 87% | 60% |
| | Variety of services | 61% | 56% |
| Accessibility | Proximity to stops | 68% | 52% |
| | Ease of boarding | 79% | 46% |
| Information | Availability of route information | 35% | 18% |
| | Timeliness of updates | 12% | 7% |
| Time | Punctuality | 78% | 46% |
| | Duration of travel | 67% | 43% |
| Customer Care | Friendliness of staff | 91% | 37% |
| | Responsiveness to complaints | 18% | 7% |
| Comfort | Seating quality | 81% | 37% |
| | Cleanliness of vehicles | 76% | 28% |
| Security | Onboard surveillance (CCTV) | 0% | 0% |
| | Personal safety perception | 68% | 13% |
| Environment | Reduced emissions | 53% | 23% |
| | Noise control | 47% | 27% |

Source: Survey data

Public transportation demonstrates a clear advantage in service offering, with higher satisfaction levels for route availability (87%) and variety of services (61%) compared to private transportation (60% and 56%, respectively). Accessibility is also better in public transportation, with 68% of respondents satisfied with the proximity to stops and 79% with the ease of boarding, outperforming private transportation, which scored 52% and 46%.

Information-related services are a common weakness for both sectors. Public transportation achieves a satisfaction rate of only 35% for route information availability, while private transportation fares worse at 18%. Timeliness of updates is particularly poor, with public transportation at 12% and private transportation at just 7%.

Time management reveals stronger performance for public transportation, with 78% satisfaction in punctuality and 67% in travel duration, compared to 46% and 43% for private

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transportation. This indicates greater reliability in public transport schedules.

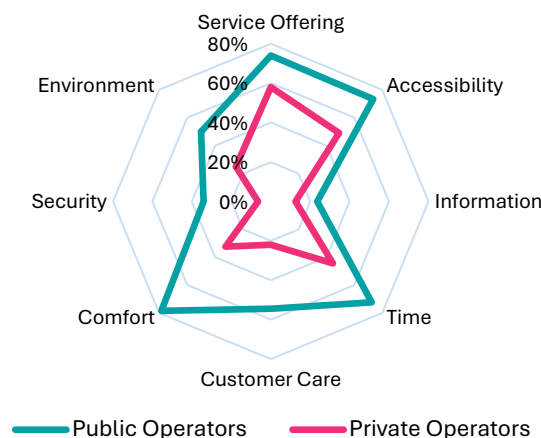
Customer care highlights a stark contrast between the two sectors. Public transportation receives a high satisfaction rate for staff friendliness (91%) compared to private transportation's 37%. However, responsiveness to complaints remains a challenge for both, scoring 18% and 7%, respectively.

Comfort levels are significantly higher in public transportation, with 81% satisfaction for seating quality and 76% for cleanliness. Private transportation trails with 37% and 28%, respectively, suggesting an opportunity for improvement in passenger amenities.

Security remains a concern, with no satisfaction reported for onboard surveillance (0% in both sectors). However, public transportation users express a greater sense of personal safety (68%) compared to private transportation users (13%).

Environmental perceptions also favour public transportation, with 53% satisfaction in reduced emissions and 47% in noise control, outperforming private transportation, which scored 23% and 27%.

Fig.2. Comparative overview of service quality dimensions



Source: Survey data

Overall, public transportation significantly outperforms private operators, particularly in Comfort (78.50%), Service Offering (74%), and Accessibility (73.50%), reflecting its broader network, superior infrastructure, and passenger-focused approach. In contrast, private operators lag behind due to limited services, smaller-scale operations, and less emphasis on meeting diverse passenger needs, emphasizing the strategic advantage of public operators in serving larger user bases.

However, both sectors share weaknesses in Information (23.50% public, 12.50% private) and Security (34% public, 6.50% private), indicating gaps in communication and safety measures. While public transportation excels in environmental performance and reliability, both sectors require targeted investments in technology, infrastructure, and customer engagement to enhance service quality and better meet passenger expectations.

4.4 Effectiveness of Supplementary Services as a Differentiation Strategy

The analysis investigates how supplementary services contribute to differentiating public and private urban transportation operators by improving service quality. Supplementary

services, which complement the core transport services, play a pivotal role in shaping customer satisfaction and loyalty. To understand their impact, a Pearson correlation analysis was conducted to examine the relationship between various supplementary services and key dimensions of service quality, including Accessibility, Comfort, and Customer Care.

These dimensions were selected due to their significant influence on passenger perceptions and experiences. Accessibility measures the ease of reaching and using transportation services, Comfort evaluates the overall travel experience, and Customer Care reflects responsiveness to passenger needs. The correlation analysis highlights how supplementary services such as Information Services, Hospitality, and Exception Handling align with these dimensions to enhance competitiveness and customer retention.

The table below presents the correlation matrix, detailing the strength and statistical significance of these relationships:

Table 4. Correlation matrix between supplementary services and overall satisfaction

| Supplementary Services | Accessibility | Comfort | Customer Care | Overall S.Quality |
|---------------------------------|----------------------|----------------|----------------------|--------------------------|
| Information Services | 0.48** | 0.51** | 0.46** | 0.52** |
| Protection of P.Property | 0.33** | 0.45** | 0.38** | 0.45** |
| Hospitality Services | 0.62** | 0.69** | 0.71** | 0.68** |
| Exception Handling | 0.65** | 0.74** | 0.76** | 0.73** |
| Billing Services | 0.15 | 0.18 | 0.22 | 0.21 |
| Payment Services | 0.12 | 0.14 | 0.19 | 0.19 |
| Consulting Services | 0.21 | 0.25 | 0.28 | 0.26 |

Note: $p < 0.01$.

Source: Survey data

The matrix highlights significant correlations between exception handling services and key quality dimensions, such as Customer Care ($r = 0.76$, $p < 0.01$) and Comfort ($r = 0.74$, $p < 0.01$). Hospitality services also show strong positive relationships with all service quality dimensions, particularly Customer Care ($r = 0.71$, $p < 0.01$).

Conversely, billing and payment services show weak or negligible correlations across all dimensions, indicating limited contributions to perceived service quality. These findings underscore the strategic importance of enhancing supplementary services like exception handling and hospitality to boost customer satisfaction and loyalty. Strengthening underperforming services, such as billing systems, could further differentiate operators and improve their competitiveness.

5. DISCUSSION

The findings from the analysis reveal significant disparities between public and private transportation services in Batna City, especially in supplementary services and service quality perceptions. Public transportation consistently outperforms private operators across key service quality dimensions, such as Comfort, Service Offering, and Accessibility. This reflects the broader and more inclusive infrastructure of public transport, which offers a greater variety of

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routes, better boarding facilities, and enhanced comfort features like air-conditioned buses and ergonomic seating. However, both sectors share common weaknesses, particularly in Information and Security. Low satisfaction rates for information availability and the lack of onboard surveillance highlight the need for both sectors to focus on improving communication and safety to build passenger trust and satisfaction.

Supplementary services play a significant role in differentiating public transportation. Public operators excel in providing a variety of supplementary services, such as hospitality and exception services, which positively impact overall satisfaction. The high correlation between supplementary services and customer satisfaction, particularly in areas like hospitality and comfort, demonstrates the importance of these services in distinguishing public transportation from private operators. However, the underperformance of both sectors in payment and billing services suggests missed opportunities to enhance convenience and foster customer loyalty.

Correlation analysis of the relationship between supplementary services and service quality perceptions further supports the idea that supplementary services significantly influence differentiation. Services like friendly customer care, special assistance for passengers with disabilities, and improved comfort are strongly linked to higher satisfaction levels, reinforcing the view that enhancing supplementary services could be a key strategy for both public and private transport operators to boost competitiveness and customer loyalty.

To conclude, although public transportation services in Batna City offer a more comprehensive service, both sectors must invest in improving communication, security, and payment systems. Addressing these gaps and prioritizing customer-centric services will enhance service quality, benefiting both operators and passengers.

6. CONCLUSION

This study has provided a comprehensive analysis of the current state of public and private transportation services in Batna City, with a particular focus on service quality perceptions and the effectiveness of supplementary services as a differentiation strategy. The findings indicate that public transportation significantly outperforms private operators in most service quality dimensions, including Comfort, Service Offering, and Accessibility. These advantages stem from the more extensive infrastructure and resources available to public operators, which enable them to cater to a larger and more diverse group of passengers. However, both sectors face challenges, particularly in areas such as Information services and Security, which require urgent attention to improve customer satisfaction and build trust.

The analysis also highlighted the critical role of supplementary services in shaping service quality perceptions. Public transportation operators demonstrate a clear advantage in providing services such as hospitality, exception handling, and customer care, which contribute to higher satisfaction levels among passengers. In contrast, private operators lag in offering such services, which could be an important area for improvement to foster customer loyalty and enhance competitiveness. Furthermore, the correlation analysis confirms that supplementary services have a positive impact on overall satisfaction, underscoring the importance of integrating these services into the core offerings of both public and private transport systems.

Ultimately, the study emphasizes the need for both public and private transport operators to focus on improving key aspects of service quality, such as information provision, security measures, and supplementary services. Enhancing these areas will not only boost customer

satisfaction but also contribute to the overall development and sustainability of transportation services in Batna City. Both sectors must prioritize a customer-centric approach, ensuring that passenger needs are met efficiently and effectively to remain competitive in a rapidly evolving market.

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