

## Border Gateways as Touchpoints: Service Quality, Fairness, and Destination Loyalty – A Systematic Literature Review

Dhidik Apriyanto<sup>1\*</sup>, Maria Christiana Iman Kalis<sup>2</sup>, Muhammad Irfani Hendri<sup>3</sup>  
Fakultas Ekonomi dan Bisnis, Universitas Tanjungpura

**Corresponding Author:** Dhidik Apriyanto [b3081251001@student.untan.ac.id](mailto:b3081251001@student.untan.ac.id)

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### ABSTRACT

Cross-border gateways serve as critical touchpoints shaping consumer experiences, perceptions of fairness, and destination loyalty. Drawing from a systematic review of empirical and theoretical studies on cross-border services including e-commerce platforms, healthcare, and emergency services. This study examines how service quality, responsiveness, and equitable resource allocation influence user satisfaction and repeated engagement. Methodologically, the review integrates quantitative surveys, structural equation modeling, and qualitative interviews to capture multi-stakeholder perspectives across borders. Findings suggest that high service quality and transparent, fair procedures significantly enhance trust and loyalty, while infrastructural and regulatory challenges moderate these effects. Implications highlight the need for integrated governance and operational strategies to optimize cross-border interactions and reinforce sustainable consumer loyalty at border gateways.

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## INTRODUCTION

Border gateways are increasingly viewed as service touchpoints, not merely as administrative or physical crossing points. In cross-border settings, travelers, consumers, migrants, logistics actors, and public-service users assess their experiences through service quality, fairness, reliability, accessibility, and trust. Prior studies show that cross-border interactions occur across various sectors, including retail shopping, tourism, e-commerce logistics, healthcare, and emergency services. For instance, Wong and Lam (2016) highlight the role of retail satisfaction and loyalty-program benefits in shaping both store and destination outcomes, while Sousa and Simões (2019) emphasize the need for deeper research on place attachment, satisfaction, and loyalty in cross-border tourism regions. Similarly, cross-border outshopping studies show that perceived product quality, risk, value for money, satisfaction, word of mouth, and repeat purchase intention are important in explaining consumer behavior across borders.

The literature also indicates that satisfaction and loyalty are strongly influenced by multidimensional service quality and perceived fairness. In cross-border e-commerce, Hui et al. (2025) found that logistics service quality, price fairness, shopping experience, and satisfaction are linked to repurchase intention, although not all logistics dimensions directly affect satisfaction. Chotisarn and Phuthong (2025) further show that price fairness, personal communication quality, and shipping information quality significantly influence satisfaction, which then affects repurchase intention and electronic word-of-mouth. Meanwhile, studies on emergency medical services and rural public services reveal that cross-border service quality also depends on language, financing clarity, service standards, institutional coordination, and governance flexibility. Therefore, this review positions border gateways as integrated service ecosystems where service quality, fairness, satisfaction, and destination loyalty interact within one conceptual framework.

Tabel 1. Research Question

No.	Research Question
RQ1	What is the distribution of studies selected by year in the area of border gateway services and cross-border interactions ?
RQ2	Which journals and publication outlets are most influential in the study of service quality, fairness, and destination loyalty at border gateways?
RQ3	Who are the most active and influential researchers in the field of cross-border gateway services and destination loyalty studies ?
RQ4	What research focuses (keywords or themes) are most frequently chosen by researchers in the context of border gateway service quality, fairness, and user satisfaction ?
RQ5	What is the distribution of scientific publications by country and region within the scope of border gateway and cross-border service research ?
RQ6	What is the distribution of scientific publications by research area within the scope used in studies examining service quality, fairness, and destination loyalty at border gateways ?

## **LITERATURE REVIEW**

This article is structured into five main sections. Section one introduces the research background, objectives, and research questions guiding this study. Section two outlines the review methodology, including literature selection criteria, data sources, and analytical techniques. Section three presents bibliometric and descriptive statistics, summarizing trends, publication patterns, and key thematic areas in cross-border gateway research. Section four provides a critical review and discussion of the literature, synthesizing findings on service quality, fairness, satisfaction, and destination loyalty. Finally, section five concludes with theoretical and practical implications, highlights research gaps, and proposes directions for future studies on border gateways as experiential touchpoints.

## **METHODOLOGY**

In conducting research, the literature review plays a crucial role in establishing a solid knowledge foundation regarding the research scope. This study employs the systematic literature review (SLR) methodology. Following prior SLR studies on Mohamed Shaffril et al. (2021), the SLR process is divided into three main stages: planning, developing/conducting the review, and reporting the results.

### *The Planning Stage*

The planning stage begins with defining the research questions and identifying relevant sources of literature that will form the research database. Research objectives guide the selection of keywords and search terms to ensure relevant and comprehensive coverage of the topic. For this study, the literature primarily consists of articles indexed in electronic databases Scopus. Formulating clear research questions at this stage is essential to structure the systematic literature review, align the methodology, and provide a foundation for subsequent stages of conducting and reporting the review.

### *The Development/Conducting Stage*

In this stage, the review process involves selecting appropriate digital libraries and databases, defining relevant title keywords, and constructing effective search strings. An initial set of literature is retrieved and screened by title and abstract, followed by full-text evaluation to exclude studies that do not meet the inclusion criteria. This step results in a refined list of primary studies and literature that align with the research objectives. These selected articles form the basis for detailed analysis and synthesis. The process ensures that only relevant, high-quality studies are considered, enabling a robust and systematic foundation for answering the research questions. An overview of the process can be seen in Figure 1.

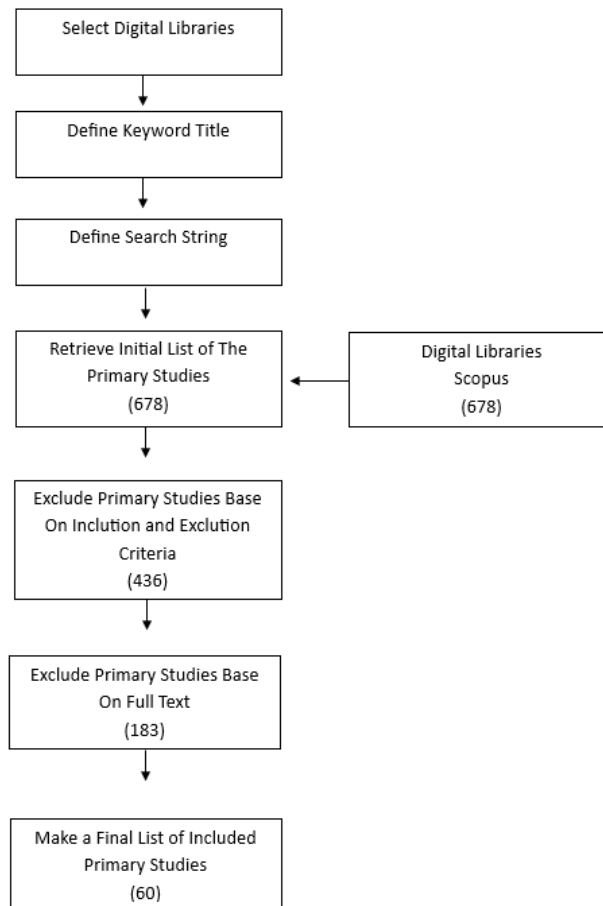


Figure 1. The flowchart of the development stage

The database used for this study is Scopus to ensure the inclusion of high-quality publications. The next step involves defining the main title keywords; in this research, keywords include “border gateways,” “service quality,” “fairness,” “destination loyalty,” and other related terms such as “cross-border services” and “user satisfaction.” Following keyword definition, search strings are created using logical operators (e.g., AND, OR, NOT) to refine the scope of the literature search. These search strings enable the researcher to systematically retrieve relevant studies, narrow down irrelevant results, and ensure comprehensive coverage of the topic, forming the foundation for subsequent screening, analysis, and synthesis in the systematic literature review process. Search string can be seen in Table 2 below :

Table 2. Search string used in the literature search

Scopus
( TITLE ( border service QUALITY ) OR KEY ( border fairness ) OR ABS ( border destination loyalty ) ) AND ( LIMIT-TO ( DOCTYPE , "ar" ) ) AND PUBYEAR > 2007 AND PUBYEAR < 2025

Retrieving the initial list of primary studies is the next step after determining the search string. The search was conducted through the Scopus database using predetermined keywords related to border gateways, cross-border services, service quality, fairness, satisfaction, and destination loyalty. Inclusion and exclusion criteria were applied to ensure that the selected studies

were relevant to the scope of this systematic literature review. These criteria are presented in Table 3.

Tabel 3. Inclusion and exclusion criteria

Scopus-indexed publications	
<b>Inclusion Criteria</b>	Research published within 2007 - 2025
	Research containing keywords related to border gateways, cross-border services, service quality, fairness, satisfaction, and destination loyalty
	Articles relevant to tourism, border management, public service, logistics, or cross-border consumer experience
<b>Exclusion Criteria</b>	Research outside the scope of border gateways and cross-border services
	Publications with incomplete bibliographic information
	Studies that do not discuss service quality, fairness, satisfaction, loyalty, or related constructs

After the initial search, the publications were screened based on title and abstract to remove irrelevant studies. The remaining articles were then evaluated through full-text review to ensure their alignment with the research objectives. The final selected studies became the basis for bibliometric analysis, descriptive statistics, and thematic synthesis in this systematic literature review.

### The Reporting Result

The reporting result stage summarizes the findings of the systematic literature review by presenting descriptive statistics, bibliometric results, and thematic discussions. It highlights publication trends, major sources, keywords, research themes, and methodological patterns related to border gateways, service quality, fairness, satisfaction, and destination loyalty. These findings support the research questions in Table 1 and clarify the development of studies in this field.

## RESEARCH RESULT

### Distribution of selected studies

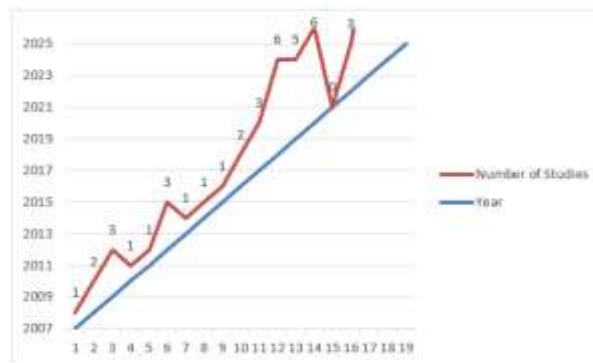


Figure 2. Distribution of selected studies over the years

This subsection answers RQ1 by analyzing CSV data using Microsoft Excel. Figure 2 shows the distribution of 60 selected studies on border gateways, service quality, fairness, satisfaction, and destination loyalty. The results indicate a rising research trend over the past 18 years, reflecting growing academic interest in this field.

### Significant Journal Publication

This subsection addresses RQ2 by showing publication sources related to border gateways, service quality, fairness, satisfaction, and destination loyalty. Figure 3 indicates that *Conflict and Health*, *Moravian Geographical Reports*, *Sustainability (Switzerland)*, *Systems*, and *World Trade Review* are the most active journals, with three publications each. These journals can serve as useful reference sources for future research.

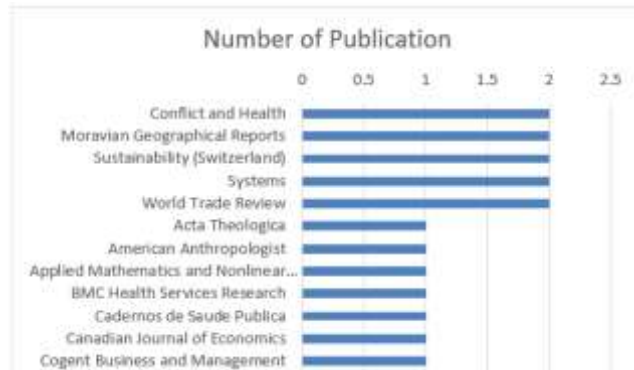


Figure 3. Number of articles from each journal

Table 4 shows the ranking of key journals using SJR scores and Q1 categories. Journals with higher SJR values are considered to have stronger academic quality, reputation, and influence in their field.

Table 4. Scimago Journal Rank (SJR) of selected journal

No	Journal Publications	SJR	Q Category
1	American Anthropologist	0.802	Q1 in Anthropology
2	Journal of Management and Organization	0.945	Q1 in Business and International Management
3	Journal of World Business	4.297	Q1 in Business and International Management
4	International Business Review	2.104	Q1 in Business and International Management
5	Journal of Development Studies	0.960	Q1 in Development
6	Proceedings of the Royal Society B: Biological Sciences	1.450	Q1 in Ecology, Evolution, Behavior and Systematics
7	World Economy	0.803	Q1 in Economics and Econometrics
8	Discourse	0.740	Q1 in Education
9	Electronic Commerce Research	0.810	Q1 in Electronic Commerce
10	IEEE Transactions on Engineering Management	1.134	Q1 in Engineering (miscellaneous)
11	Journal of Borderlands Studies	0.558	Q1 in Geography, Planning and Development
12	Sustainability (Switzerland)	0.688	Q1 in Geography, Planning and Development
13	Learning Health Systems	0.968	Q1 in Health Informatics
14	Journal of Medical Systems	0.962	Q1 in Health Informatics
15	Journal of Medical Internet Research	1.992	Q1 in Health Informatics
16	BMC Health Services Research	1.174	Q1 in Health Policy
17	Enterprise and Society	0.695	Q1 in History
18	Malaria Journal	1.143	Q1 in Infectious Diseases
19	World Trade Review	0.554	Q1 in Law

20	JAMA Network Open	3.546	Q1 in Medicine (miscellaneous)
21	Heliyon	0.644	Q1 in Multidisciplinary
22	West European Politics	2.753	Q1 in Political Science and International Relations
23	Globalization and Health	1.697	Q1 in Public Health, Environmental and Occupational Health
24	Conflict and Health	1.392	Q1 in Public Health, Environmental and Occupational Health
25	PLOS Global Public Health	0.908	Q1 in Public Health, Environmental and Occupational Health
26	Journal of Global Health	1.172	Q1 in Public Health, Environmental and Occupational Health
27	Fertility and Sterility	2.028	Q1 in Reproductive Medicine
28	Journal of Hospitality and Tourism Research	1.428	Q1 in Tourism, Leisure and Hospitality Management
29	Transport Policy	1.726	Q1 in Transportation
30	Urban Science	0.618	Q1 in Urban Studies

### **Keyword Co-occurrence and Average Publication Year**

In this subsection will answer RQ4, co-occurrence analysis was used to identify the relationship between keywords and authors in the selected literature. Using VOSviewer, this analysis helps show how topics are connected and how authors collaborate within this research field. The keyword visualization in Figures 4 and 5 shows four clusters. Cluster 1, shown in red, includes seven items related to service quality, quality control, and international trade. Cluster 2, shown in green, consists of five items focusing on cross-border e-commerce, logistics service quality, and customer satisfaction. Cluster 3, shown in blue, contains four items related to cross-border issues, fairness, and satisfaction. Meanwhile, Cluster 4, shown in yellow, contains one item focusing on sales. Based on the results of Co-occurrence analysis through VosViewer software, a total of 38 keywords/items were obtained if at least 6 or more keywords were used in the literature being analyzed. The keywords that come out most often in this study are electronic commerce (Occ. = 18.0, TSL = 77.0), cross border (Occ. = 18.0, TSL = 76.0), quality of service (Occ. = 15.0, TSL = 63.0), service quality (Occ. = 13.0, TSL = 47.0), fairness (Occ. = 11.0, TSL = 2.0), and cross border e commerce (Occ. = 10.0, TSL = 41.0). By the average publication year (APY), the research keywords logistics (2024.60), international trade (2024.20), customer satisfaction (2024.17), and e-commerces (2024.00) are the keywords used in this latest research.

Table 5. Summaries of co-occurrence keywords and average publication year

Cluster	Keyword/Term	Occ	*TSL	*APY
<b>1 (Red)</b>	electronic commerce	18.0	77.0	2022.78
	quality of service	15.0	63.0	2022.47
	quality control	8.0	40.0	2022.88
	e- commerces	7.0	40.0	2024.00
	service quality evaluation	6.0	35.0	2023.00
	international trade	5.0	22.0	2024.20

	supply chains	5.0	25.0	2023.80
<b>2 (Green)</b>	service quality	13.0	47.0	2023.08
	cross-border e-commerce	10.0	41.0	2023.50
	logistics service quality	8.0	23.0	2022.75
	customer satisfaction	6.0	22.0	2024.17
	logistics	5.0	17.0	2024.60
<b>3 (Blue)</b>	cross-border	18.0	76.0	2022.61
	fairness	11.0	2.0	2019.55
	satisfaction	6.0	7.0	2017.50
	perceived value	5.0	9.0	2018.00
<b>4 (Yellow)</b>	sales	6.0	28.0	2022.50

\*TSL = Total Strength Link, \*APY = average publication year ^2023.50 = the documents were published in mid-2023

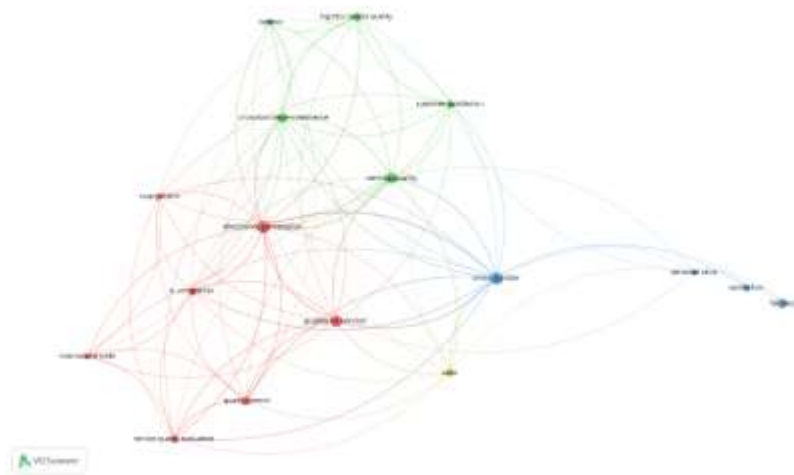


Figure 4. Network visualization of co-occurred keywords

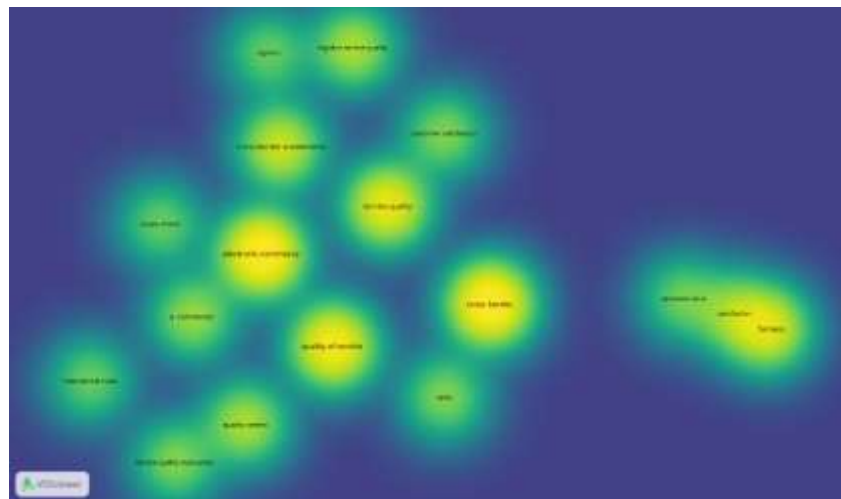


Figure 5. Density visualization of co-occurred keywords

**Most Active and Influential Researcher**



Figure 6. Co-authorship author

Figure 7. Influential researchers and number of studies

No	Author	Documents	Citations
1	Zhang, Yu	3	42
2	Cañero-Morales, Pablo M.	2	15
3	Do, Quynh Huong	2	97
4	Kim, Thai Young	2	97
5	Moral-Cuadra, Salvador	2	15
6	Orgaz-Agüera, Francisco	2	15
7	Wang, Xueqin	2	97
8	Agrawal, Rajat	2	10
9	Nangia, V.	2	10
10	Li, Meng	2	2
11	Suteca, Raslapat	2	2

This subsection addresses RQ3 by examining the selected key studies to identify the authors who have been most actively involved in this research area. Figure 6 presents the co-authorship analysis using VOSviewer, while Figure 11 shows the descriptive results of significant authors. The findings indicate that the most active authors contributed to at least three publications, either as main authors or co-authors. Zhang and Yu were identified as the leading contributors with three studies each. Meanwhile, Cañero-Morales, Pablo M.; Do, Quynh Huong; Kim, Thai Young; Moral-Cuadra, Salvador; Orgaz-Agüera, Francisco; Wang, Xueqin; Agrawal, Rajat; Nangia, V.; Li, Meng; and Suteca, Raslapat each contributed to two studies.

**Publication by Country and Organization**

This subsection addresses RQ5 by examining the country and institutional distribution of the 60 primary studies. This analysis helps show which countries and organizations have contributed most to research on this topic. As shown in Table 6, China has the highest number of publications with 24 documents,

followed by India and the United States with six documents each. Spain and South Korea contributed five publications, while Thailand and Germany each produced four. Malaysia and the Dominican Republic contributed three publications, while Taiwan, the United Arab Emirates, Indonesia, and Macao each recorded two publications. At the institutional level, Chiang Mai University, the Faculty of International Logistics, the Indian Institute of Technology Roorkee, International Logistics, Chung-Ang University, the School of Modern Posts, the Technological University of Santiago, and the University of Córdoba each contributed two publications.

Table 6. Publications by country and organization

Country	Documents	Organization	Documents
China	24	Chiang Mai University	2
India	6	Faculty of International Logistics	2
United States	6	Indian Institute of Technology Roorkee	2
Spain	5	International Logistics, Chung-Ang University	2
South Korea	5	School of Modern Posts	2
Thailand	4	Technological University of Santiago	2
Germany	4	University of Córdoba	2
Malaysia	3		
Dominican Republic	3		
Taiwan	2		
United Arab Emirates	2		
Indonesia	2		
Macao	2		
Poland	2		
Turkey	2		
United Kingdom	2		

**Publication By Research Area**

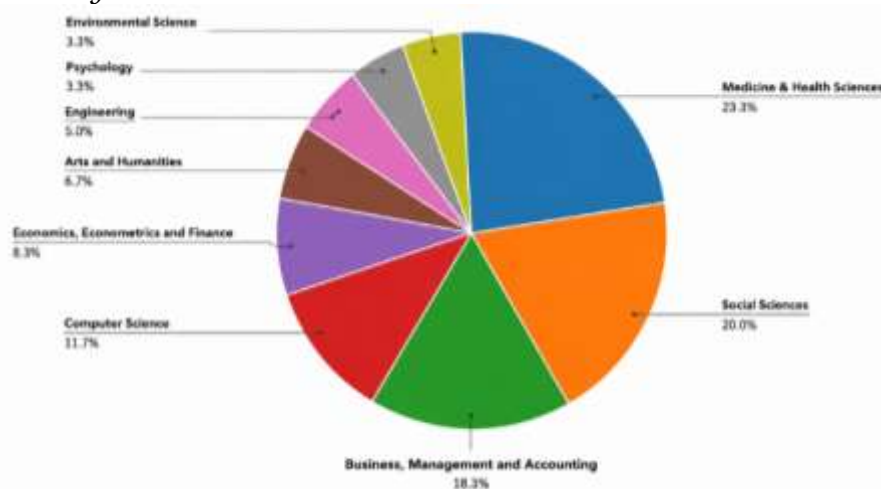


Figure 7. Research area of selected studies

In this subsection will answer RQ6, understanding the research areas of the selected studies is important for identifying the main academic fields that shape this topic. As shown in Figure 7, Medicine and Health Science is the most dominant field, accounting for 23.3% of the studies. This is followed by Social Science at 20%, Business, Management and Accounting at 18.3%, Computer Science at 11.7%, and Economics, Econometrics and Finance at 8.3%.

## **DISCUSSION**

The cross-border research has developed from a narrow concern with physical borders into a broader discussion of service systems, mobility, digital platforms, and consumer experience. Earlier studies tended to frame borders as social and economic spaces where trade, health services, tourism shopping, and logistics activities were shaped by local needs and institutional limitations. For example, studies on border communities and tourist outshopping show that border users do not only cross for mobility, but also for perceived value, service access, product quality, and satisfaction. This indicates that border gateways should be understood not merely as geographical entry points, but as service encounters where users evaluate convenience, risk, fairness, and trust.

Recent studies expand this discussion by emphasizing cross-border e-commerce, logistics service quality, digital public services, and emergency or health-related services. The findings suggest that satisfaction plays a central role in connecting service quality, price fairness, communication quality, delivery information, and repurchase intention in cross-border contexts. However, the relationship is not always linear because cultural differences, regulatory barriers, language issues, financing uncertainty, interoperability problems, and unequal service standards can influence how users perceive service quality and fairness. Therefore, future research on border gateways, service quality, fairness, satisfaction, and destination loyalty needs to integrate both consumer-based and institutional perspectives. This will help explain not only why people cross borders, but also how service experience, perceived fairness, and system reliability shape their willingness to return, recommend, or remain loyal to a cross-border destination or platform.

## **CONCLUSIONS AND RECOMMENDATIONS**

The cross-border studies are no longer limited to border movement, but have expanded into a complex discussion of service quality, fairness, satisfaction, digital integration, health access, logistics, and loyalty-related behavior. Users evaluate cross-border services through practical and emotional dimensions, including delivery reliability, price fairness, communication quality, perceived risk, accessibility, trust, and the overall service experience. In cross-border e-commerce, satisfaction consistently appears as an important bridge between logistics service quality and future behavior, such as repurchase intention and electronic word-of-mouth. In public and emergency services, the key issues are not only service availability, but also interoperability, coordination, language barriers, financing uncertainty, and differences in service standards. Therefore, future research should develop a more integrated framework that connects consumer perception, institutional readiness, technological infrastructure, and

policy coordination in one analytical model. Researchers are also encouraged to use comparative and mixed-method approaches across countries, sectors, and border types to capture the different meanings of fairness, satisfaction, and loyalty in cross-border contexts. For practitioners and policymakers, the main recommendation is to improve transparency, communication, service standardization, digital interoperability, and collaborative governance so that border gateways can function not only as transit points, but also as reliable service ecosystems that strengthen user trust, satisfaction, and long-term destination loyalty.

## ADVANCED RESEARCH

Future research should develop integrated models that connect service quality, user satisfaction, trust, digital readiness, and policy coordination in cross-border contexts. Comparative and mixed-method studies across different countries and border settings are recommended to better understand how institutional, technological, and behavioral factors jointly influence service effectiveness, loyalty, and sustainable cross-border development.

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