

# Digital Transformation and Profit Margins in Travel Agencies: An Empirical Study

Charu Okam<sup>1</sup>; Odang Mara<sup>2</sup>

<sup>1,2</sup> Department of Management, Rajiv Gandhi University, Doimukh, India

Publication Date: 2025/09/16

**Abstract:** This study analysis the various factor of e-commerce that affect the profit margin in the travel agency industry. The transformation in this travel agency over the last two decades is due to the rapid growth of the internet and digital technologies. The traditional or conventional travel agencies, which relied on physical offices and direct customer interactions, are start adopting online platforms to deliver services, reflecting a shift toward e-commerce. This study inspects how the adoption of e-commerce are related to the various factors that influence the profit margin of travel agencies located in the Itanagar Capital Region (ICR), Arunachal Pradesh. Primary data were collected from 28 travel agencies using questionnaire through field surveys, focusing on variables such as the number of online bookings, years of service, business model, service competition, and financial challenges. For data analysis, the regression model and ANOVA analyses were employed to evaluate the strength and significance of these independent variables to the profit margin (dependent variable). The analytical results shows that the number of online bookings has a strong and statistically significant positive impact on profit margins, explaining approximately 74.6% of the variation, highlighting the very importance parameter of digital marketing. The adoption of innovative business models also shows a moderate yet significant positive effect, suggesting that strategic adaptation enhances financial performance. In contrast, traditional factors including years of service, service competition, and financial challenges were found to have little to no significant effect on profit margin. These findings indicate that a strong digital presence, combined with customer-focused and innovative survives, which play a very critical factor to financial success. The study explain the various role of digital marketing in shaping the competitiveness and growth of travel agencies and provides practical insights for agencies seeking to optimize online strategies, adopt suitable business models, and meet evolving consumer expectations in a digitally driven market.

**Keywords:** Business Models; Digital Adoption; E-Commerce; Financial Challenges; Online Booking.

**How to Cite:** Charu Okam; Odang Mara (2025) Digital Transformation and Profit Margins in Travel Agencies: An Empirical Study. *International Journal of Innovative Science and Research Technology*, 10(9), 657-663. <https://doi.org/10.38124/ijisrt/25sep648>

## I. INTRODUCTION

The development of internet and integration with mobile technology help the transformation of travel and tourism industry. They undergone major changes in the last two decades as traveler can access the travel ticket and booking lodging from any place and any time. Travel agencies, which were once limited to physical offices and direct contact with customers, are now increasingly using online platforms to conduct their services. The shift from traditional methods to e-commerce has not only changed the way services are delivered but has also had a strong influence on how travel agencies earn their profit. Customers now prefer to book tickets, hotels, and packages online because it is faster, more convenient, and often cheaper. This changing behavior has forced travel agencies to adopt new techniques and business models to remain competitive.

E-commerce has become a very important technology which provide drastic growth in the tour and travel industry. Online booking systems, digital payment options, and the ability to compare services instantly have made it easier for

traveler and make easier to take decisions. For travel agencies, this means that the number of online bookings has become an important factor in determining profit margin. Agencies with a strong online services with better digital tools are often able to attract more customers and improve their financial performance. On the other hand, agencies that still depend mostly on traditional methods may find it difficult to survive in the long run.

While the adoption of digital platforms has opened new opportunities, travel agencies also face several challenges. Increased competition, the need to invest in technology, and financial pressures are common problems in the sector. Moreover, factors such as the number of years a travel agency has been in service and the type of business model it follows can also influence its success. However, the actual impact of these factors on profit margin is not always clear. Some agencies with long years of service may not necessarily have higher profits, while others with new and innovative business models may show better results.

This situation highlights the importance of studying how different e-commerce methods and operational strategies affect the profit margin of travel agencies. While there are many studies on the travel industry in general, fewer have focused on the direct relationship between online service adoption and profit margins, especially in the context of smaller and regional agencies. Therefore, it is necessary to conduct research that measures the effect of online bookings, years of service, business models, service competition, and financial challenges on the profit margins of travel agencies.

➤ *There are 5 main objective of this study and proposed 5 hypothesis to verify the objectives. The proposed 5 hypothesis for the testing are as follow:*

- There is a positive relationship between the number of online bookings by travel agencies and their profit margins.
- There is a positive relationship between the years of service of travel agencies and their profit margins.
- The adoption of different business models by travel agencies has a positive effect on profit margins.
- There is a positive relationship between service competition and profit margins in travel agencies.
- There is a positive relationship between financial challenges and profit margins in travel agencies.

To test these hypotheses, the study uses regression analysis and ANOVA techniques based on field survey data. These methods allow us to measure how strongly each factor is connected to profit margins and whether the relationships are statistically significant. For example, regression analysis helps to show how much profit margin increases when online bookings go up by a certain percentage. ANOVA is used to test whether the models as a whole are meaningful in explaining changes in profit.

The importance of this study lies in its practical implications for travel agencies. The findings will help agencies understand which factors are most important in improving profit margin. If online bookings are shown to have a strong and positive impact, agencies can invest more in developing better websites, apps, and online marketing. If business models play a meaningful role, managers can focus on designing strategies that suit current customer demands. At the same time, if years of service or financial challenges are found to have little or no effect, agencies can rethink their focus and pay more attention to areas that directly influence profit.

This research also contributes to the academic understanding of how e-commerce affects traditional service industries. While many sectors have been studied in terms of digital adoption, the travel industry is unique because it deals with both tangible and intangible products, requires trust and reliability, and is highly sensitive to customer preferences. By analyzing the specific case of travel agencies, this study adds new insights to the broader discussion on digital transformation and profit margin.

In summary, the travel and tourism industry is experiencing rapid digital growth, and travel agencies must adapt to survive and grow. The rise of online bookings, the importance of business models, and the pressures of competition and financial challenges all play a role in shaping profit margin. However, not all factors may be equally important, and understanding which ones truly matter is essential for making informed business decisions. This research addresses this need by systematically analyzing the relationship between e-commerce adoption and profit margins in travel agencies. The results are expected to guide both practitioners and researchers in identifying effective strategies for success in the digital age.

## II. LITERATURE REVIEW

E-commerce has evolved significantly since its inception in 1979, driven by technological advances, online payments, and the rise of platforms such as Amazon, eBay, and Alibaba. Scholars highlight its role in reducing transaction costs, enhancing efficiency, and enabling new business models like B2B, B2C, C2C, and C2B[1][2]. Emerging technologies such as AI, AR/VR, IoT, and blockchain continue to transform customer experiences and supply chains [3]. Consumer behavior studies, such as in [4], emphasize purchase intention as the strongest predictor of online shopping, though barriers like poor service quality persist. Logistics service quality—timeliness, accuracy, and problem resolution—has also been shown to directly influence satisfaction and loyalty[5].

While e-commerce offers convenience and accessibility[6], challenges in India remain, including infrastructure gaps, COD reliance, and cybersecurity risks[7]. Research on e-commerce in India highlights opportunities and challenges shaped by trust, infrastructure, and digital adoption. In [9], the author emphasizes lack of trust in suppliers as a major barrier, though recent consumer protection laws are improving confidence. In [10], the authors identify prospects in sectors like textiles, travel, and retail, but note persistent issues such as ethical concerns and infrastructural gaps. Similarly, in [11], it is shown that small enterprises in Assam face technological, financial, and provincial barriers, requiring targeted interventions like IT training and better connectivity. In [12], the authors reveal low to moderate digital marketing adoption among MSMEs, limited by skill shortages and resource constraints, while in [13], it explains structural challenges such as logistics and regulatory hurdles despite rapid market growth.

Studies in Northeast India [14]–[16] highlight both consumer opportunities and negative impacts on traditional retail. Broader perspectives [17]–[19], emphasize rising smartphone use, online payments, and government policies driving expansion, though COD reliance, cybersecurity risks, and weak infrastructure remain concerns. The growth of e-commerce and digital technologies has reshaped service-oriented businesses, including travel agencies, by influencing consumer trust, service quality, and operational efficiency. Studies on financial risk attitudes among entrepreneurs in Northeast India [20] highlight the importance of education,

training, and credit access in reducing risk aversion—factors equally relevant for small travel agencies navigating digital adoption. Research on quick commerce [21], shows how collaboration, service quality, and timeliness affect consumer adoption, offering parallels for travel agencies seeking to improve booking reliability and customer satisfaction. Similarly, in [22] emphasize information security and trust in mobile services and payment systems, both critical for online travel transactions.

Broader studies on m-commerce adoption [23] and sustainability in e-commerce [24] explain the roles of trust, convenience, and ethical practices in shaping consumer loyalty. Collectively, these insights suggest that for travel agencies, profit margin and competitiveness increasingly depend on adopting secure, customer-centric digital models that enhance trust, reduce operational risks, and align with evolving consumer expectations.

The reviewed literature shows that e-commerce has become a key driver of business transformation by lowering costs, improving efficiency, and creating new business models. However, its success depends heavily on trust, service quality, technological readiness, and supportive infrastructure. In the Indian context, opportunities for growth are evident across multiple sectors, including travel, yet challenges such as limited digital literacy, logistics constraints, COD dependence, and cybersecurity risks continue to restrict its full potential.

For travel agencies, the literature highlights that customer trust, secure payment systems, and service reliability are central to sustaining competitiveness in the digital era. Studies also indicate that while consumer adoption of online platforms is growing, small enterprises, especially in regions like Northeast India, face barriers in skills, infrastructure, and resources. This suggests that the adoption of e-commerce in travel services is not only a matter of technology but also of building consumer confidence, improving service quality, and ensuring risk management.

This review of literature points to a dual reality: e-commerce offers significant opportunities for travel agencies to expand reach and improve profit margin, but its long-term success will rely on overcoming structural challenges and adopting customer-focused digital strategies.

### III. RESEARCH METHODOLOGY

This study was designed to examine the relationship between e-commerce adoption methods and the profit margins of travel agencies. The focus was on identifying how factors such as the number of online bookings, years of service, business models, service competition, and financial challenges influence profit margin. A quantitative research design was used, as it allows for statistical testing of hypotheses and measurement of the strength of relationships between variables.

#### ➤ Data Collection

The study is based on primary data collected through a structured field survey. A total of 28 travel agencies were selected using purposive sampling, as these agencies were actively engaged in both traditional and online service delivery. The survey questionnaire was developed to collect information on key variables, including the number of online bookings, years of service, type of business model adopted, level of service competition, financial challenges, and reported profit margins. To ensure accuracy and reliability, the questionnaire included both closed-ended and scaled questions, and responses were cross-verified wherever possible.

#### ➤ Variables of the Study

The dependent variable in this study is Profit Margin of travel agencies. The independent variables are:

- Number of Online Bookings
- Years of Service of the agency
- Business Model adopted
- Service Competition
- Financial Challenges

Each variable was measured using data provided by the agencies during the survey.

#### ➤ Data Analysis

The collected data was coded and entered into statistical software for analysis. Descriptive statistics were first used to summarize the data and provide an overview of the sample characteristics. To test the hypotheses, regression analysis was employed to measure the strength and direction of the relationship between each independent variable and profit margin. The regression model also helped in developing predictive equations. In addition, Analysis of Variance (ANOVA) was applied to test the overall significance of the regression models. The F-statistic and significance levels (p-values) were used to determine whether the independent variables had a meaningful impact on profit margins. Confidence intervals and standard errors were calculated to check the precision and reliability of the estimates.

#### ➤ Ethical Considerations

All participating travel agencies were informed about the purpose of the study, and their responses were kept confidential. The data was used strictly for academic purposes, and no agency-specific results were disclosed.

In summary, the research methodology combines field-based data collection with statistical techniques such as regression and ANOVA to provide reliable insights into how e-commerce adoption and related challenges influence the profit margin of travel agencies.

### IV. DATA ANALYSIS AND INTERPRETATION

This section presents the data analysis and interpretation of factors influencing the profit margin of travel agencies, with a focus on the role of e-commerce adoption. The analysis examines three key aspects: number of online

bookings, years of service, and type of business model, along with challenges such as service competition and financial constraints. Statistical tools, including regression and ANOVA, are employed to test the proposed hypotheses and evaluate the relationships between these variables and profit margin.

The findings provide insights into how digital adoption and operational factors shape business performance, while

also highlighting the limitations posed by competition and financial challenges. The various testing of proposed hypothesis in this study using regression model and ANOVA model are as follow

- *Hypothesis (H<sub>1</sub>): There is a positive relationship between No. of Online Booking by Travel Agency and Profit Margin.*

Table 1 Regression analysis between no. of Online Booking by Travel Agencies and Profit Margin

Regression Statistics	
Multiple R	0.863935
R Square	0.746384
Adjusted R Square	0.73663
Standard Error	5.842992
Observations	28

The regression analysis shows a strong positive relationship between online bookings and profit margin. With a Multiple R of 0.864 and R<sup>2</sup> of 0.746, about 74.6% of profit margin variation is explained by online bookings. The Adjusted R<sup>2</sup> (0.737) confirms model reliability, while the standard error (5.843) indicates accurate predictions across

28 observations. These findings suggest that increasing the share of online bookings significantly enhances profit margin. Overall, the results highlight the strategic importance of strengthening digital booking channels to improve financial performance and competitiveness in the travel agency sector.

Table 2 Anova analysis between no. Online Booking by Travel Agencies and Profit Margin

	df	SS	MS	F	Significance F
Regression	1	2612.3	2612	76	3.18385E-09
Residual	26	887.65	34.14		
Total	27	3500			

The ANOVA tested the overall significance of the regression model, with 1 degree of freedom for the independent variable (percentage of online bookings). The Regression Sum of Squares (SS = 2612.35) reflects variation in profit margin explained by online bookings, while the Residual SS (887.65, df = 26) represents unexplained variation. The Mean Squares for regression and residuals are 2612.35 and 34.14, respectively. The high F-statistic (76.52)

and very low Significance F ( $p = 3.18 \times 10^{-9} < 0.05$ ) confirm the model's statistical significance. Thus, the hypothesis is accepted, showing that online bookings significantly influence profit margin, underlining the importance of digital booking channels for travel agencies.

- *Hypothesis (H<sub>2</sub>): There is a positive relationship between Year of Services by Travel Agencies and Profit Margin..*

Table 3 Regression Analysis Between Year of Service by Travel Agencies and Profit Margin

Regression Statistics	
Multiple R	0.13898607
R Square	0.01931713
Adjusted R Square	-0.01840145
Standard Error	11.4897782
Observations	28

The regression analysis examined the effect of years of service on profit margin and revealed a very weak positive relationship (Multiple R = 0.139). The R<sup>2</sup> value of 0.019 shows that only 1.9% of profit margin variation is explained by years of service, while the negative Adjusted R<sup>2</sup> (-0.018) indicates the model performs worse than using the mean

alone. The high standard error (11.490) further suggests poor prediction accuracy across 28 observations. Overall, the findings indicate that years of service has little to no impact on profit margin. This suggests that other factors, such as digital adoption and service quality, play a more significant role in driving profit margin.

Table 4 Anova analysis between Year of Service by Travel Agencies and Profit Margin

	df	SS	MS	F	Significance F
Regression	1	67.60	67.	0.51	0.480593
Residual	26	3432.9	132		
Total	27	3500			



The ANOVA tested the effect of years of service on profit margin. With 1 degree of freedom, the Regression Sum of Squares (SS = 67.61) explained only a small part of the variation, while the Residual SS (3432.39, df = 26) showed most variation remained unexplained. The Mean Squares were 67.61 for regression and 132.02 for residuals. The low F-statistic (0.512) and high p-value ( $0.481 > 0.05$ ) confirm the

model is not statistically significant. Thus, the hypothesis is rejected, indicating that years of service has no meaningful impact on profit margin, and other factors play a greater role in profit margin.

➤ *Hypothesis (H<sub>3</sub>): Adaptation of different Business model by Travel Agencies has positive effect on Profit Margin.*

Table 5 Regression Analysis between Adaptation of Different Business Model by Travel Agencies and Profit Margin

Regression Statistics	
Multiple R	0.447214
R Square	0.2
Adjusted R Square	0.169231
Standard Error	10.37749
Observations	28

The regression analysis examined the impact of business model on profit margin and revealed a weak positive relationship (Multiple R = 0.447). The R<sup>2</sup> value of 0.200 indicates that only 20% of profit margin variation is explained by business model, while the Adjusted R<sup>2</sup> (0.169) confirms limited explanatory power. The standard error of 10.378

suggests considerable deviation between predicted and observed values across 28 observations, reflecting low prediction accuracy. Overall, the findings show that business model has only a minor effect on profit margin, suggesting that other factors, such as digital adoption and service quality, play a stronger role in driving profit margin.

Table 6 Anova analysis between adaptation of different Business Model by Travel Agencies and Profit Margin

	df	SS	MS	F	Significance F
Regression	1	700	700	6.5	0.01703
Residual	26	2800	107.69		
Total	27	3500			

The ANOVA tested the effect of business model on profit margin. With 1 degree of freedom, the Regression Sum of Squares (SS = 700) explained part of the variation, while the Residual SS (2800, df = 26) showed the remaining unexplained variation. The Mean Squares were 700 for regression and 107.69 for residuals. The F-statistic (6.5) and

p-value ( $0.017 < 0.05$ ) confirm the model is statistically significant. Thus, the hypothesis is accepted, showing that business model has a meaningful but moderate effect on profit margin. This suggests that the choice of business model influences profit margin, though other factors remain important.

➤ *Hypothesis (H<sub>4</sub>): There is a positive relationship between Number of Services Competition with Profit Margin in Travel Agencies*

Table7 Regression analysis between Services Competition and Profit Margin

Regression Statistics	
Multiple R	0.33016512
R Square	0.10900901
Adjusted R Square	0.07474012
Standard Error	10.9517622
Observations	28

The regression analysis shows a weak positive relationship between service competition and profit margin (Multiple R = 0.330). The R<sup>2</sup> value of 0.109 indicates that only 10.9% of the variation in profit margin is explained by service competition, with the remaining 89% influenced by other factors. The Adjusted R<sup>2</sup> of 0.075 confirms the model's

low explanatory power. A relatively high standard error of 10.95 suggests notable deviation between predicted and actual values. Based on 28 observations, the findings indicate that service competition alone is not a strong predictor of profit margin.

Table 8 Anova analysis between Services Competition and Profit Margin

	df	SS	MS	F	Significance F
Regression	1	381	381.5	3.1	0.08617
Residual	26	311	119.94		
Total	27	3500			

➤ *Hypothesis (H<sub>5</sub>): There is a positive relationship between Percentage of Financial Challenges and Profit Margin in Travel Agencies.*

Table 9 Regression analysis between Financial Challenges and Profit Margin Travel

Regression Statistics	
Multiple R	0.02051957
R Square	0.00042105
Adjusted R Square	-0.0380243
Standard Error	11.5999442
Observations	28

The regression analysis shows a negligible relationship between financial challenges and profit margin. The Multiple R (0.0205) and R<sup>2</sup> (0.00042) indicate that financial challenges explain less than 0.05% of variation in profit margin, with nearly all variation due to other factors. The negative Adjusted

R<sup>2</sup> (-0.038) confirms the model's lack of explanatory power. A high standard error of 11.60 reflects substantial unexplained variability. Based on 28 observations, the findings suggest that financial challenges are not a meaningful predictor of profit margin in this dataset.

Table 10 Anova analysis between Financial Challenges and Profit Margin Travel Agencies

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	1.47	1.47	0.010	0.9174553
Residual	26	3498	134.		
Total	27	3500			

The ANOVA results confirm that the regression model between financial challenges and profit margin is statistically insignificant. The regression SS (1.47) is negligible compared to the residual SS (3498.53), indicating minimal explanatory power. The F-statistic (0.0109) is far below the threshold, and the p-value (0.917) is much higher than 0.05, confirming lack of significance. With regression MS of 1.47 versus residual MS of 134.56, the results show financial challenges do not meaningfully affect profit margin. Hence, the hypothesis of a positive relationship is rejected, highlighting other factors as key determinants of profit margin.

The analysis explored key factors influencing the profit margin of travel agencies, with emphasis on e-commerce adoption. Regression and ANOVA results revealed that online bookings strongly and significantly impact profit margin, explaining about 74.6% of its variation. This confirms the strategic importance of digital booking channels in enhancing financial performance. In contrast, years of service showed no significant effect, indicating that experience alone does not guarantee higher profit margin. Business model adoption displayed a moderate but statistically significant influence, suggesting that innovative models can improve margins, though other factors remain critical. Service competition showed only a weak relationship with profit margin, highlighting that competitive pressure alone does not strongly determine outcomes. Finally, financial challenges had negligible explanatory power, with results confirming no meaningful effect on profit margin. Overall, the findings emphasize that profit margin in the travel agency sector is driven more by digital adoption and strategic business models than by traditional factors like service duration or competitive presence. Effective use of online platforms, coupled with customer-focused models, emerges as the most critical driver of growth and competitiveness.

## V. CONCLUSION

This study demonstrates that the profit margin of travel agencies is strongly influenced by e-commerce adoption, particularly the number of online bookings, which significantly drives profit margins. Business model choices also have a moderate but meaningful impact, indicating that strategic adaptation can enhance financial performance. In contrast, traditional factors such as years of service, service competition, and financial challenges were found to have little or no significant effect on profit margin. These findings highlight that digital presence and customer-focused operational strategies are far more critical than experience or competitive pressures. Travel agencies aiming for growth and competitiveness should prioritize strengthening online channels, adopting innovative business models, and leveraging digital tools to meet evolving consumer preferences. Overall, the study explain the central role of digital transformation in shaping the success of travel agencies in today's market.

## REFERENCES

- [1]. K. R. Ranjan and R. Singh, "The impact of electronic commerce on business organization," Research Journal of Arts, Management & Social Sciences, vol. 22, pp. 80–89, 2022.
- [2]. J. Wang, "Opportunities and challenges of international e-commerce in the pilot areas of China," International Journal of Marketing Studies, vol. 6, no. 6, pp. 141–149, 2014.
- [3]. M. C. Enache, "E-commerce trends," Ann Dunarea De Jos Univ Galati Fascicle I Econ Appl Inform, vol. 2, pp. 67–71, 2018.

- [4]. Y. J. Lim, A. Osman, S. N. Salahuddin, A. R. Romle, and S. Abdullah, "Factors influencing online shopping behavior: The mediating role of purchase intention," *Procedia Economics and Finance*, vol. 35, pp. 401–410, 2016.
- [5]. S. Akil and M. C. Ungan, "E-commerce logistics service quality: Customer satisfaction and loyalty," *Journal of Electronic Commerce in Organizations*, vol. 20, no. 1, pp. 1–21, 2022.
- [6]. M. Shipra and C. Janet, "A study on e-commerce and digital platform," *International Journal of Scientific Research in Engineering and Management (IJSREM)*, vol. 7, no. 1, pp. 1–9, 2023.
- [7]. N. A. Reddy and R. Divekar, "A study of challenges faced by e-commerce companies in India and methods employed to overcome them," *Procedia Economics and Finance*, vol. 11, pp. 553–560, 2014.
- [8]. N. Chawla and B. Kumar, "E-commerce and consumer protection in India: The emerging trend," *Journal of Business Ethics*, vol. 180, no. 3, pp. 581–604, 2022.
- [9]. A. Panigrahi, R. Upadhyaya, and P. P. Raichurkar, "E-commerce services in India: Prospects and problems," *International Journal on Textile Engineering and Processes*, vol. 2, no. 1, pp. 15–21, 2016.
- [10]. M. Khaund and B. D. Nath, "A study on barriers of e-commerce adoption in small enterprises of Assam," *Turkish Online Journal of Qualitative Inquiry (TOJQI)*, vol. 10, no. 4, pp. 676–685, 2019.
- [11]. A. Barman and M. Mahanta, "Digital marketing adoption among MSMEs in Assam," *International Research Journal of Multidisciplinary Scope (IRJMS)*, vol. 6, no. 1, pp. 361–372, 2025.
- [12]. S. S. Rampure, "E-commerce in India: Challenges and prospects," *Journal of Emerging Technologies and Innovative Research*, vol. 6, no. 6, pp. 282–290, 2019.
- [13]. K. Hijam and K. D. Meetei, "A study on growth progress of start-ups in the North East India," *International Journal of Creative Research Thoughts (IJCRT)*, vol. 13, no. 2, pp. a675–a680, 2025.
- [14]. T. Thaman, "Online shopping: An insight from consumers of Deomali, Tirap District of Arunachal Pradesh—Opportunities and challenges," *International Journal of Advanced Research in Science, Communication and Technology*, vol. 5, no. 1, pp. 762–768, 2025.
- [15]. J. S. Drema, "The effect of online shopping on the retail stores: A study of Bomdila Township of West Kameng District," *Research Inspiration*, vol. 10, no. 2, pp. 16–19, 2025.
- [16]. O. Libang, "The impact of e-commerce on traditional retail in Pasighat," *International Journal of Humanities Social Science and Management*, vol. 5, no. 4, pp. 542–550, 2025.
- [17]. M. Mukherjee and S. Roy, "E-commerce and online payment in the modern era," *International Journal of Advanced Research in Computer Science and Software Engineering*, vol. 7, no. 5, pp. 1–5, 2017.
- [18]. P. Jagarwar, "A critical study of e-commerce services in India," *International Journal for Research Trends and Innovation (IJRTI)*, vol. 7, no. 8, pp. 517–523, 2022.
- [19]. S. Nougaraheya, G. Shetty, and D. Mandloi, "A review of E-commerce in India: The past, present, and the future," *International Journal of Multidisciplinary*, vol. 6, no. 3, pp. 12–22, 2021.
- [20]. K. Goswami, B. Hazarika, and K. Handique, "Determinants of financial risk attitude among the handloom micro-entrepreneurs in North East India," *Asia Pacific Management Review*, vol. 22, no. 2, pp. 168–175, 2017.
- [21]. A. Raj and D. Das, "Optimizing Q-commerce delivery: Unravelling the interplay of fee, penalty, and rider-platform collaborative efforts," *International Journal of Production Economics*, vol. 281, p. 109503, 2025.
- [22]. A. K. Sahu, M. Z. Khan, and P. Gupta, "Instant food on your table: The role of logistics service quality dimensions in the adoption of instant online food delivery services," *Transportation Research Part E: Logistics and Transportation Review*, vol. 200, p. 104205, 2025.
- [23]. K.-C. Yao, J.-J. Yang, H.-W. Lo, S.-W. Lin, and G.-H. Li, "Using a BBWM-PROMETHEE model for evaluating mobile commerce service quality: A case study of food delivery platform," *Research in Transportation Business & Management*, vol. 49, p. 100988, 2023.
- [24]. S.-Y. Huang, T. Wang, Y.-T. Huang, and T.-N. Yeh, "Information security risk items and management practices for mobile payment using non-financial-institution service providers: An exploratory study," *International Journal of Accounting Information Systems*, vol. 53, p. 100684, 2024.