



e-ISSN:2582-7219



INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY RESEARCH IN SCIENCE, ENGINEERING AND TECHNOLOGY

Volume 7, Issue 7, July 2024



INTERNATIONAL
STANDARD
SERIAL
NUMBER
INDIA

Impact Factor: 7.521



6381 907 438



6381 907 438



ijmrset@gmail.com



www.ijmrset.com



Digitalization on E-Commerce and its Effects on Logistics and Impulsive Purchasing

Mathad Smita Shankar, Dr Kavyashree K

Research Scholar (Assistant Professor), Department of Management and Commerce, Srvinas University,
Mangalore, India

Professor, Department Management and Commerce, Srvinas University, Mangalore, India

ABSTRACT: This article looks at how digitization has affected logistics and e-commerce, with a particular emphasis on consumer behaviour and sustainability. Significant consequences of digitalization on the economy, environment, and society are identified through a qualitative investigation of five Nigerian e-commerce logistics companies. Results show that whereas digitalization primarily has positive effects on the economy, it also reduces land use and changes work patterns. The review also emphasizes the impact of the Unified Payments Interface (UPI) on impulsive purchasing in Chennai, India, stressing the significance of user-friendliness, quick processing, and demographic variables. This thorough review offers insights into the situation of the digital economy now and makes recommendations for future study topics.

KEYWORD: E-commerce, Consumer behaviour, Unified Payments Interface (UPI), Digital economy.

I. INTRODUCTION

A disruptive era in the digital economy has begun with the advent of information and communication technologies (ICTs), which are rapidly digitizing economies around the world and bringing new business models to bear. Information flow, process optimization, and business resilience have all advanced significantly in the twenty-first century. This was especially true during the COVID-19 epidemic, when digital tools kept businesses operating. Simultaneously, the emergence of digital payments has transformed transaction techniques, providing unmatched speed, ease, and security. Additionally, it has impacted consumer behaviour by encouraging impulsive buying habits.

A key component of the digital economy, e-commerce makes it easier for shoppers and sellers to conduct business online. Efficient logistics, which include supply chain management, inventory control, and warehousing, guarantee the efficient movement of products and information. By integrating developing nations into the global economy, ICTs have greatly increased trade efficiency. The Internet of Things (IoT) and other technologies have fuelled the fourth industrial revolution, which has further accelerated digitalization and transformed market structures and business processes.

By analysing their effects on consumer behaviour and logistics, this review article seeks to summarize the revolutionary developments in digital payments and e-commerce. By examining the interactions between these elements, it aims to offer a thorough grasp of recent advancements and difficulties. The study also explores the consequences of digitalizing logistics for sustainability, concentrating on streamlining logistical procedures in Nigerian e-commerce enterprises. By providing insightful information for future study and useful applications, the analysis in this paper adds to the current conversation in the digital economy.

1.1 Benefits of Digitalization on e-commerce

- **Increased Speed and Efficiency:** Digitalization speeds up logistics processes by allowing real-time tracking, automating warehouses, and optimizing delivery routes. As a result, deliveries are made more quickly and procedures are reduced, which lowers expenses overall and boosts productivity.
- **Improved Customer Experience:** Faster delivery times and improved tracking systems benefit customers, increasing their happiness and loyalty. Using targeted marketing and sophisticated algorithms, personalized shopping experiences draw in more people and raise the possibility of impulsive purchases.
- **Cost Reduction:** Digital tools and automation aid in lowering labor and operating expenses in logistics. Reduced operating expenses for e-commerce platforms can result in more competitive pricing and promotions, which can boost impulsive buying and increase profit margins.



- **Increased Market Reach:** Companies can reach new markets by using digital platforms to effectively manage global supply chains. Access to a larger audience through e-commerce platforms raises the possibility of impulsive purchases and boosts revenue.
- **Data-Driven Decision Making:** Businesses may enhance demand forecasting and inventory management by having access to real-time data and analytics. Data analytics in e-commerce facilitates a better understanding of consumer behavior and preferences, allowing for tailored offerings and more successful marketing campaigns.

1.2 Challenges on E-Commerce

1. **Security Issues:** As digital technologies are used more frequently, logistics companies are more vulnerable to data breaches and cyberattacks. Customers' worries about payment security and privacy may also make them reluctant to make rash purchases online.
2. **Infrastructure and Technology Investment:** It takes a large financial commitment to maintain the required infrastructure and deploy cutting-edge digital technologies. Particularly small firms could find it difficult to purchase the technology required to compete with more established e-commerce sites.
3. **Workforce Adaptation:** To adjust to new technology, employees in the logistics industry may need retraining, and change may be met with opposition. Traditional retail methods may be disrupted by the shift to digital, which could result in job losses in physical locations.
4. **Environmental Impact:** Although digitization can lessen certain environmental effects, these benefits may be outweighed by an increase in packaging and transportation activities. Online shopping's ease of use can cause overconsumption and waste production, which can have a negative impact on the environment.
5. **Digital Divide:** Disparities in service quality may result from areas lacking adequate digital infrastructure's inability to capitalize on technological improvements. The accessibility of digital platforms varies among users, potentially constraining the scope and diversity of e-commerce.
6. **Complex Regulatory Environment:** It can be difficult for international logistics operations to navigate the laws and compliance standards of several nations. For e-commerce companies, ensuring compliance with numerous consumer protection laws and regulations may be difficult and expensive.

II. RELATED WORK

1.Cano, J.A.; Londoño-Pineda, A.; Rodas 2022 With a focus on 99 papers from Scopus released in 2021 and 2022, this study offers a bibliometric analysis and literature assessment on the sustainability of logistics operations in e-commerce contexts. It draws attention to the fact that writers from Italy and India have the highest number of publications; publications in journals such as Sustainability, the International Journal of Logistics Research and Applications, and Sustainable Cities and Society are notable for their volume and impact on citations. The primary subjects that were found to be of interest are supply chains, last-mile delivery, urban logistics, packaging, traffic congestion, environmental implications, supply networks, and the COVID-19 pandemic's aftermath. Important research themes include aspects related to sustainability, innovative operating modes like parcel lockers and micro-depots, crowdshipping, technology innovations like electric cars and specialized software, and pertinent policymaking initiatives[1].

2. Štofejová, L., Král', T., Fedorko 2023, This study investigates, from a sustainability standpoint, the relationship between consumer behavior when shopping online for eco-friendly products and the factors influencing it. Through the use of a questionnaire survey and several analytical techniques such as confirmatory factor analysis, descriptive analysis, and structural equation modeling, the study finds that environmental attitudes are strongly impacted by digitalization in green marketing. Furthermore, a person's environmental purchasing behavior is greatly influenced by their environmental mindset, lifestyle, willingness to pay for green products, and subjective norms. Future buying intentions are subsequently influenced by these characteristics. The findings underline the necessity for firms to quickly adjust to shifting consumer attitudes toward sustainability in order to remain competitive, and they provide insightful guidance for online merchants looking to build and implement successful green marketing strategies[2].

3.Liu, K. P., Chiu, W., Chu, J 2022, This study uses PLS-SEM to investigate how supply chain integration and digitization affect business performance. The results show that both variables have a favorable impact on business performance, with supply chain external integration acting as a partly mediating element. Small and medium-sized businesses gain directly from digitalization, whereas large corporations improve financial performance through supply chain integration after digitalization efforts. Managers and legislators may develop successful digital transformation strategies with the help of these ideas[3].



4. Khalifa, N., Abd Elghany, M 2021, This study looks at how artificial intelligence (AI) might make supply networks in emerging nations more flexible. It illustrates through case studies how artificial intelligence (AI) in manufacturing and logistics can result in improved tactical and strategic choices, enhancing warehousing and logistics management. Adoption of AI increases productivity, but it also affects wages and employment rates. A favorable environment for AI expansion before deployment is fostered by the information and communication technology alignment model, which is supported in this research. The paper notes that rising economies face obstacles because of low wages, insufficient skills, and limited financial resources[4].

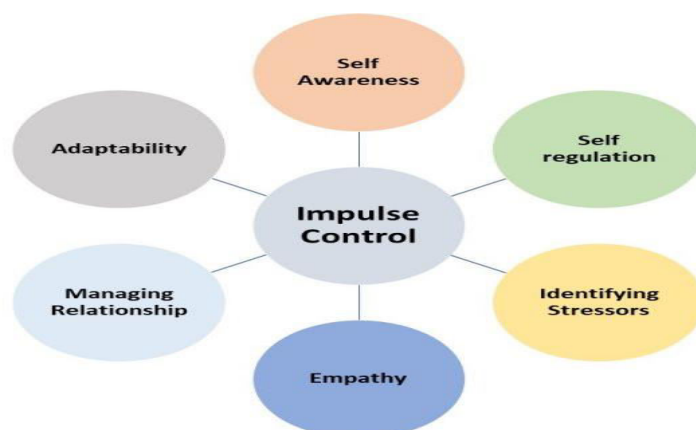
5. R. Gupta, C. Kapoor 2020 this paper describe, A digitally empowered economy is the goal of the Digital India program. India is having trouble implementing digital payment mechanisms like mobile wallets, UPI, and micro ATMs to the fullest extent despite their introduction. The nation's high cash-to-GDP ratio of 11.4% in 2019 illustrates how dependent it is on cash, which comes with hefty expenses. In order to uncover age-related impediments to the acceptance of digital payments, this research uses surveys and interviews to analyze literature and consumer behavior. Proposed solutions include inter-app transactions, shared wallets, and short-term loans. In the end, a digital payment wallet model built on blockchain is created to improve dependability and security[5].

III. METHODOLOGY

The study uses a quantitative research approach and a structured survey to gather information on the effect of e-commerce on logistics performance from Korean logistics professionals. In order to investigate the connections between e-commerce elements and logistics efficacy, cost-effectiveness, and delivery accuracy, the data is analysed using descriptive and inferential statistics. In addition to pointing out sample size and self-reported data limitations, the study highlights important variables and trends and makes recommendations for further research.

The three sustainability aspects listed by the WCED (1987) are the main emphasis of the report's evaluation of the qualitative consequences of digitization on Nigeria's economy, environment, and society. It analyses the effects of digitalization in logistics by applying a predetermined set of criteria to a descriptive sustainability evaluation. Owing to the infancy of digital technology and the difficulties in acquiring data that is representative, the study depends on subjective evaluations. Ten of the criteria are related to economic sustainability, two are related to environmental sustainability, and five are related to social sustainability. A total of seventeen criteria are identified. With the existing dearth of thorough sustainability assessments, the evaluation considers the impact of digitization from a logistical standpoint by consulting experts and drawing on literature.

The study explores the influence of Unified Payments Interface (UPI) on impulsive buying behaviour, revealing that UPI's convenience significantly heightens consumers' propensity for spontaneous purchases. The findings indicate that younger individuals and those with specific demographic profiles are particularly prone to impulsive buying due to UPI's seamless transaction process. However, the research highlights the need for a broader analysis, including factors such as pricing and promotions, to fully understand impulsive purchasing tendencies. The study underscores the importance of consumer discipline in managing impulsive spending and suggests that future research should consider additional variables to provide a more comprehensive view of buying behaviour.





The introduction of UPI has revolutionized consumer behaviour by simplifying and expediting impulsive shopping. Although this convenience may encourage impulsive buying, paying with knowledge and restraint might help customers make more thoughtful decisions. Customers can steer clear of needless impulse purchases by being aware of their financial situation and spending patterns. In order to prevent using this ease to promote impulsive buying, businesses also have an ethical and transparent duty to uphold.

IV. CONCLUSION

In conclusion, India is prepared to transform efficiency, transparency, and accessibility through the widespread use of digital technologies in a variety of industries, including financial technology, e-commerce, and freight transportation[4]. With data analytics and automated systems, freight industry digitization may solve present issues and promote innovation. Even while e-commerce has competition and security issues[5], it has revolutionized old company models and improved consumer experiences and access to global markets. By facilitating easy, safe transactions and advancing financial inclusion, the Unified Payments Interface (UPI) has had a huge impact on financial technology[6]. Harnessing the full potential of these digital technologies and promoting sustainable growth and development across these industries will require ongoing advancements and supportive frameworks.

REFERENCES

1. Cano, J.A.; Londoño-Pineda, A.; Rodas, C. Sustainable Logistics for E-Commerce: A Literature Review and Bibliometric Analysis. *Sustainability* 2022, 14, 12247. <https://doi.org/10.3390/su141912247>.
2. Štofejová, L., Král, T., Fedorko, R., Bačík, R., & Tomášová, M. (2023). Sustainability and Consumer Behavior in Electronic Commerce. *Sustainability*, 15(22), 15902. <https://doi.org/10.3390/su152215902>.
3. Liu, K. P., Chiu, W., Chu, J., & Zheng, L. J. (2022). The Impact of Digitalization on Supply Chain Integration and Performance. *Journal of Global Information Management*, 30(1), 1–20. <https://doi.org/10.4018/jgim.311450>.
4. Khalifa, N., Abd Elghany, M., Abd Elghany, M., & Tan, A. W. K. (2021). Exploratory research on digitalization transformation practices within supply chain management context in developing countries specifically Egypt in the MENA region. *Cogent Business & Management*, 8(1). <https://doi.org/10.1080/23311975.2021.1965459>.
5. R. Gupta, C. Kapoor and J. Yadav, "Acceptance Towards Digital Payments and Improvements in Cashless Payment Ecosystem," 2020 International Conference for Emerging Technology (INCET), Belgaum, India, 2020, pp. 1-9, doi: 10.1109/INCET49848.2020.9154024.
6. THE GROWTH TRAJECTORY OF UPI-BASED MOBILE PAYMENTS IN INDIA: ENABLERS AND INHIBITORS. (2022). *Indian Journal of Finance and Banking*, 45–59. <https://doi.org/10.46281/ijfb.v11i1.1855>.
7. Plekhanov, D., Franke, H., & Netland, T. H. (2023). Digital transformation: A review and research agenda. *European Management Journal*, 41(6), 821–844. <https://doi.org/10.1016/j.emj.2022.09.007>.
8. Abdulkarim A. Oloyede, Nasir Faruk, Nasir Noma, Ebinimi Tebepah, Augustine K. Nwaulune, "Measuring the impact of the digital economy in developing countries: A systematic review and meta- analysis, *Heliyon*" Volume 9, Issue 7, 2023, e17654, ISSN 2405-8440, <https://doi.org/10.1016/j.heliyon.2023.e17654>.
9. P. Yogananth, K. Priyadharshini, S. Mahalakshmi, R. Udhayasanthiya and A. Shilpasree, "Customer demanding products in online shopping — A novel framework," 2017 International Conference on Algorithms, Methodology, Models and Applications in Emerging Technologies (ICAMMAET), Chennai, India, 2017, pp. 1-4, doi: 10.1109/ICAMMAET.2017.8186720.
10. Pan, C. L., Bai, X., Li, F., Zhang, D., Chen, H., & Lai, Q. (2021). How Business Intelligence Enables E-commerce: Breaking the Traditional E-commerce Mode and Driving the Transformation of Digital Economy. 2021 2nd International Conference on E-Commerce and Internet Technology (ECIT). <https://doi.org/10.1109/ecit52743.2021.00013>.
11. A. Matar, M. M. Abdeldayem and S. H. Aldulaimi, "The Growing Digitalization of E-Commerce in the MENA Region: Consumer Behavior and Shift Towards Digital Payment Methods," 2024 ASU International Conference in Emerging Technologies for Sustainability and Intelligent Systems (ICETSIS), Manama, Bahrain, 2024, pp. 1-5, doi: 10.1109/ICETSIS61505.2024.10459416.
12. W. A. Aziz, "Digital Marketing Competencies as a Factor in the Success of E-Commerce Small Businesses in International Markets," 2022 International Conference on Data Analytics for Business and Industry (ICDABI), Sakhir, Bahrain, 2022, pp. 402-411, doi: 10.1109/ICDABI56818.2022.10041460.



INTERNATIONAL
STANDARD
SERIAL
NUMBER
INDIA



INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY RESEARCH IN SCIENCE, ENGINEERING AND TECHNOLOGY

| Mobile No: +91-6381907438 | Whatsapp: +91-6381907438 | ijmrset@gmail.com |

www.ijmrset.com