

## Instant Delivery Services: A Bibliometric Analysis

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### Abstract

The instant delivery sector represents a rapidly evolving segment of the Indian retail market. Its primary value proposition lies in the capability to deliver a broad assortment of goods to consumers within extremely short timeframes, often as little as 10 minutes. In India, key instant delivery platforms include Dunzo Daily, Swiggy Instamart, Big Basket Daily, and Blinkit. These firms employ a decentralized fulfillment model by establishing strategically located micro-warehouses, commonly known as “dark stores,” in densely populated urban areas. Orders are processed and dispatched from these facilities by delivery personnel, enabling near-immediate fulfillment. The instant delivery model can be viewed as an advanced extension of the traditional e-commerce framework, emphasizing speed and proximity to consumers. An initial dataset of 119 scholarly publications, covering the period from 2015 to 2026, was obtained from the Scopus database. After a rigorous selection and screening procedure, the final set of articles was examined using bibliometric methods supported by the *bibliometrix* package in RStudio, along with visualization software including VOSviewer. The data were examined using the Bibliometrix package in RStudio to evaluate trends in annual scientific output, identify leading authors, core publication sources, most cited countries, most relevant affiliations and analyze keyword structures using VOSviewer to conduct network analysis and generate visual representations of relationships among keywords. These visualizations enabled the identification of distinct keyword clusters, offering insights into the key research areas within the instant delivery domain.

**Keywords** – Instant Delivery, Rapid Delivery, On-demand Delivery, Consumer, Customer, User, Client.

### 1. Introduction

Instant delivery services have experienced substantial growth and rapid transformation in recent years, fueled by rising consumer demand for convenience and faster delivery across

sectors such as food, groceries, etc. This expansion has reshaped traditional delivery models, positioning online platforms as an integral component of contemporary urban (Kumar & Chidambara, 2023). From small local entrepreneurs to large multinational enterprises, businesses have leveraged the extensive opportunities offered by e-commerce to broaden their customer base and enhance operational efficiency. In parallel, the instant delivery segment is transforming the retail landscape, emerging as a significant driver of innovation and sustained economic growth (Ray, 2011). E-commerce mainly functions across four major models: business-to-business, business-to-consumer, consumer-to-consumer, and government-to-business. In the context of instant delivery, these platforms enhance competitive advantage by enabling faster, simpler, and more efficient transaction processes (Ghose et al., 2021). The e-commerce industry is continuously evolving to meet customers' growing demand for instant delivery services. The COVID-19 pandemic substantially accelerated the expansion of India's online retail sector, resulting in rapid growth of the e-commerce market (Ranjekar & Roy, 2023). A rapidly emerging segment of e-commerce characterized by ultra-fast fulfillment is referred to as **instant delivery services**. This concept is closely associated with terms such as *hyperlocal delivery* and *time-bound delivery*. Key market leaders in this segment include Zepto and Pickily, while several established platforms have also introduced instant delivery variants, such as Dunzo Daily, Swiggy Instamart, BigBasket Daily, and Blinkit (Kumar & Chidambara, 2023).

Instant delivery services are emerging as the future of traditional retail and e-commerce sectors, emphasizing ultra-fast order fulfillment, typically within 10–15 minutes of purchase. Fueled by the fast-paced lifestyles of urban consumers, this model has gained substantial adoption in metropolitan markets. Furthermore, India is projected to become the world's third-largest economy by 2030, supported by an estimated 300 million middle-income and 29 million high-income households. The Indian retail sector is expected to reach USD 99 billion by 2024, with significant growth driven by grocery and apparel segments (Ranjekar & Roy, 2023). The growth of instant delivery services can be attributed to several critical factors, including technological innovations such as real-time inventory management and advanced route optimization systems. In addition, the widespread adoption of smartphones and mobile internet has transformed consumer purchasing behavior, enabling customers to order groceries, ready-to-eat meals, household essentials, and personal care products with just a few taps. Moreover, the COVID-19 pandemic accelerated the adoption of instant delivery platforms. The market is projected to expand 10–15 times, from approximately USD 0.3

billion to USD 5 billion by 2025. Currently contributing nearly 10% to the online grocery segment, this share is expected to increase to 40–50% in the coming years (Nougarahiya et al., 2021). Part of the shift in consumer expenditure can be attributed to a reallocation from apparel and lifestyle goods toward essential household items. Moreover, the COVID-19 pandemic accelerated digital adoption, resulting in an approximately 80% surge in online grocery purchases in 2020, which reached USD 2,660 million. This sharp rise in demand was accompanied by heightened expectations for **instant delivery**, leading to the rapid expansion of instant delivery–based business models. The industry is projected to grow at a CAGR of 27.9% during the period from FY 2022 to FY 2027 (Ranjekar & Roy, 2023). Despite the rapid growth of **instant delivery services** in India, comprehensive reviews of the existing research remain limited. This study addresses this gap by examining the key drivers of instant delivery and its implications for consumers, businesses, and the broader economy in the Indian context.

Therefore, a comprehensive review based on the highly credible Scopus database is essential. This study also aims to offer an up-to-date overview of **instant delivery services** and sustainability, thereby supporting future research in this domain (Tiwari et al., 2023). Furthermore, this study adopts a bibliometric approach using VOSviewer and RAnalytics to analyze scientific literature. By examining scholarly research related to instant delivery services, the analysis identifies key keywords, influential studies, and emerging research themes. This methodology enables a systematic mapping of the academic landscape, providing valuable insights into the evolution and development of instant delivery research.

## 2. Objectives

- To systematically examine the intellectual structure and temporal evolution of instant delivery services research.
- To identify the foremost contributors to instant delivery research by analyzing and ranking the leading authors, countries, and institutional affiliations.
- To synthesize the existing body of literature to develop a structured research agenda for instant delivery services.

## 3. Key Technical Components in Instant Delivery Services

The mobile application functions as the central interface connecting consumers with instant delivery service providers. In the Indian market, instant delivery is facilitated by multiple

platform-based firms, including Zepto, Swiggy Instamart, Blinkit, and Dunzo Daily. These applications are designed to minimize transactional complexity, enabling a seamless ordering experience. Upon entering their delivery location, users are presented with a curated, location-specific product assortment determined by nearby fulfillment centers. This assortment typically spans frozen goods, processed foods, personal care products, apparel, and other essential commodities, highlighting the platforms' emphasis on speed, convenience, and localized inventory optimization (Yang et al., 2024). Instant delivery platforms are engineered to provide a frictionless and highly efficient shopping experience. These systems leverage artificial intelligence and advanced analytics to forecast demand based on historical purchasing behavior. Integrated inventory management systems enable real-time monitoring of stock levels, order flows, and sales performance, supporting predictive decision-making that mitigates overstocking and stockout risks. Central to instant delivery operations is the strategic location of micro-fulfillment centers within dense urban areas, which minimizes delivery lead times. These facilities employ automation, robotics, and Internet of Things (IoT) technologies to accelerate inventory handling and order fulfillment processes (Bhandari, 2014). Another critical determinant of instant delivery performance is the effectiveness of last-mile delivery technologies. These encompass route optimization algorithms, real-time tracking and customer notification systems, as well as artificial intelligence and machine-learning applications that enhance delivery accuracy and responsiveness. The adoption of electric and other eco-friendly vehicles further supports both cost efficiency and sustainability objectives. From a cost-structure perspective, instant delivery operations are predominantly driven by technology and operational expenditures, accounting for approximately 45–50% of total costs, followed by personnel expenses (25–30%). Overhead and advertising costs constitute smaller but significant shares, each ranging between 5–10%.

Although existing literature extensively examines the overall evolution of e-commerce, the impacts of instant delivery services remain relatively underexplored. In developing economies, particularly India, empirical research addressing the defining characteristics of instant delivery, associated freight movement patterns, and their spatial implications is limited. Consequently, a significant research gap persists regarding the spatial requirements and broader urban impacts of instant delivery systems within Indian cities. To address this gap, the present study employs a bibliometric research methodology using the *Bibliometrix* package in R in combination with VOSviewer. The study aims to provide actionable insights

into the evolution, thematic structure, and emerging trends of instant delivery services across multiple analytical dimensions.

#### **4. Research Methodology**

Scopus, launched by Elsevier in 2004, was developed as a comprehensive search and indexing platform for scholarly literature. At its inception, the abstract and citation database contained approximately 27 million publication records spanning the period from 1966 to 2004. Since then, Scopus has expanded substantially, now indexing over 76 million records across a wide range of disciplines, with coverage extending from publications dating back to 1988 through 2019 (Virmani & Anand, 2025). Despite being owned by Elsevier, Scopus demonstrates broad publisher diversity. Elsevier-published sources constitute only 9.9% of the indexed journals and book series, contributing 17.4% of the total articles between 2012 and 2018. In contrast, 90.1% of the serialized titles—accounting for 82.6% of indexed articles—originate from a wide range of international publishers, underscoring the database’s balanced and multidisciplinary coverage (Baas et al., 2020).

##### Stage 1: Database Search

Scopus was chosen as the data source due to its strict indexing standards and comprehensive bibliometric coverage, which ensure high-quality and scholarly publications. Its extensive metadata makes it well suited for bibliometric analysis and large-scale literature reviews. The search employed keywords closely aligned with the research focus, including “Quick Commerce”, “Instant Delivery”, “Rapid Delivery”, “On-Demand Delivery”, “Consumer”, “Customer”, “User” and “Client” Only published documents were considered, resulting in a final dataset of 303 articles.

##### Stage 2: Language Filtration

This restriction was applied due to the authors’ proficiency in English and the impracticality of translating extensive datasets for bibliometric analysis. Consequently, 3 articles were removed, and a total of 300 articles remained for subsequent analysis.

##### Stage 3: Subject Filtration

This filtration narrowed the subject areas to those most relevant to Instant Delivery. We excluded articles categorized under “ Engineering”, “Decision Sciences”, “Computer Science”, “Mathematics”, “Medicine”, “Energy”, “Agricultural and Biological Sciences”, “Psychology”, “Physics and astronomy”, “Material Science”, “Earth and Planetary Sciences” and “Chemical Engineering” ” as these areas are not pertinent to our study. This step excluded 181 articles, leaving a final set of 119 articles for our bibliometric review.

## **5. Literature Search**

The literature search was carried out using leading academic literature and citation databases. The Boolean “OR” operator was applied to capture publications across multiple related concepts. In the initial stage, the keywords “Instant delivery”, “Rapid Delivery” and “On-Demand Delivery” were employed to refine the search to the core research area. In later stages, additional terms were introduced in the article titles using the “OR” operator, including “ Consumer”, “Customer”, “User” and “Client” to ensure comprehensive coverage of the topic.

## **6. Results of Bibliometric Analysis**

### **6.1 Initial Statistics**

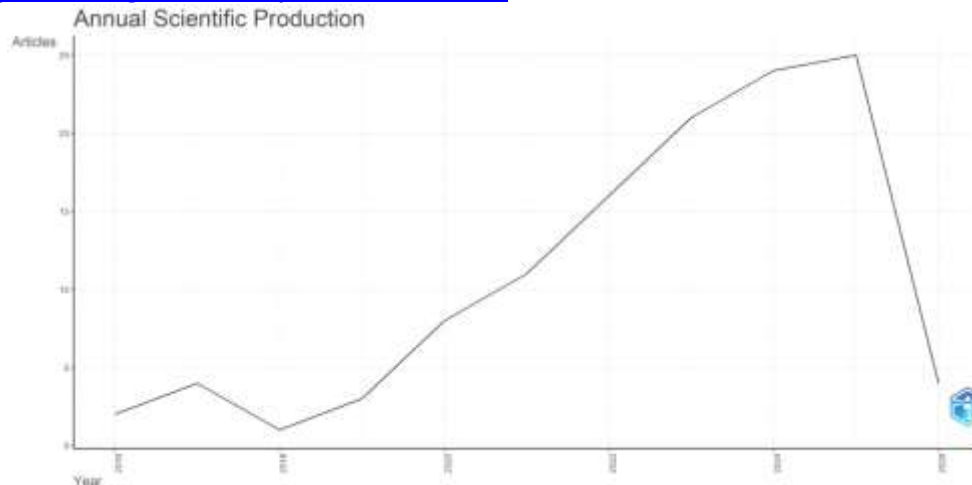
The bibliometric analysis comprises 119 publications published between 2016 and 2026 across 89 sources, highlighting the interdisciplinary and dispersed nature of the research domain. The field demonstrates sustained growth, with an annual growth rate of 7.18%, indicating steadily increasing scholarly attention. The relatively low average document age of 3.26 years reflects the contemporary orientation of the literature, while an average of 14.69 citations per document points to a meaningful level of academic influence. Conceptually, the domain exhibits considerable thematic richness, as evidenced by 824 Keywords Plus and 478 author-defined keywords, suggesting diversified and evolving research trajectories. Authorship patterns reveal a strong collaborative structure, with 350 contributing authors, an average of 3.27 co-authors per publication, and 28.57% international co-authorship, underscoring the global relevance of the field. Journal articles dominate the publication landscape, whereas the limited presence of review studies indicates opportunities for future integrative research. Fig 1. depicts the temporal evolution of scientific output from 2016 to 2026. Publication activity remains limited and uneven during the early years, indicating an

emergent research phase. From 2019 onward, a sustained and accelerated growth trajectory is evident, reflecting increasing scholarly attention and consolidation of the field. Output peaks in 2025, suggesting a phase of heightened maturity and research intensity. The sharp decline observed in 2026 should be interpreted with caution, as it most likely reflects partial-year coverage and indexing delays rather than an actual downturn in research activity.

Table 1: Summary Statistics

Description	Results
MAIN INFORMATION ABOUT DATA	
Timespan	2016:2026
Sources (Journals, Books, etc)	89
Documents	119
Annual Growth Rate %	7.18
Document Average Age	3.26
Average citations per doc	14.69
References	0
DOCUMENT CONTENTS	
Keywords Plus (ID)	824
Author's Keywords (DE)	478
AUTHORS	
Authors	350
Authors of single-authored docs	12
AUTHORS COLLABORATION	
Single-authored docs	14
Co-Authors per Doc	3.27
International co-authorships %	28.57
DOCUMENT TYPES	
Article	91
book chapter	9
conference paper	17
Review	2

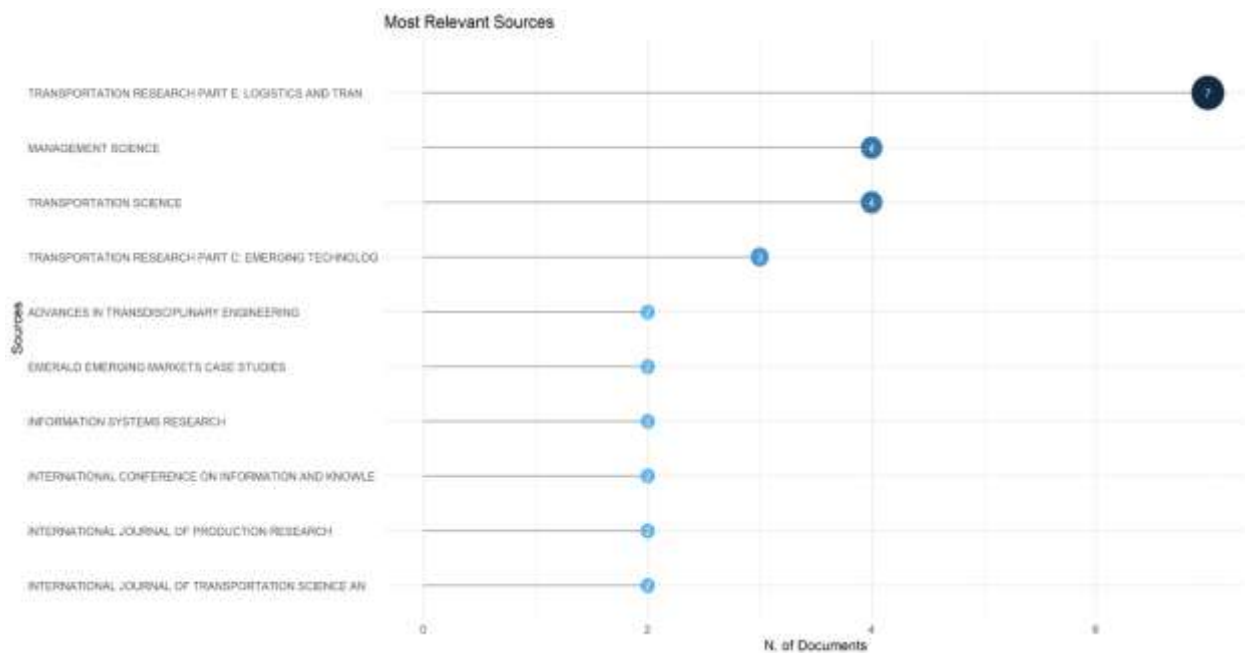
Figure 1: Publication of Article



## 6.2 Publication of Articles by Journals

Figure 2 presents the **top 10 journals** contributing to the quick commerce literature, revealing the core publication outlets shaping this research domain. *Transportation Research Part E: Logistics and Transportation Review* stands out as the leading source, publishing **7 articles**, thereby establishing itself as a central platform for logistics- and transportation-focused quick commerce research. This is followed by *Management Science* and *Transportation Science*, each contributing **4 articles**, highlighting the growing integration of operational, managerial, and transportation perspectives. *Transportation Research Part C: Emerging Technologies* accounts for **3 articles**, reflecting the increasing prominence of technology-enabled solutions in quick commerce. The remaining journals—including *Advances in Transdisciplinary Engineering*, *Information Systems Research*, and the *International Journal of Production Research*—each contribute **2 articles**, indicating a dispersed yet interdisciplinary dissemination pattern. Collectively, these sources emphasize key themes such as logistics efficiency, rapid fulfillment, technological integration, and data-driven decision-making, underscoring the multidimensional foundations of quick commerce research.

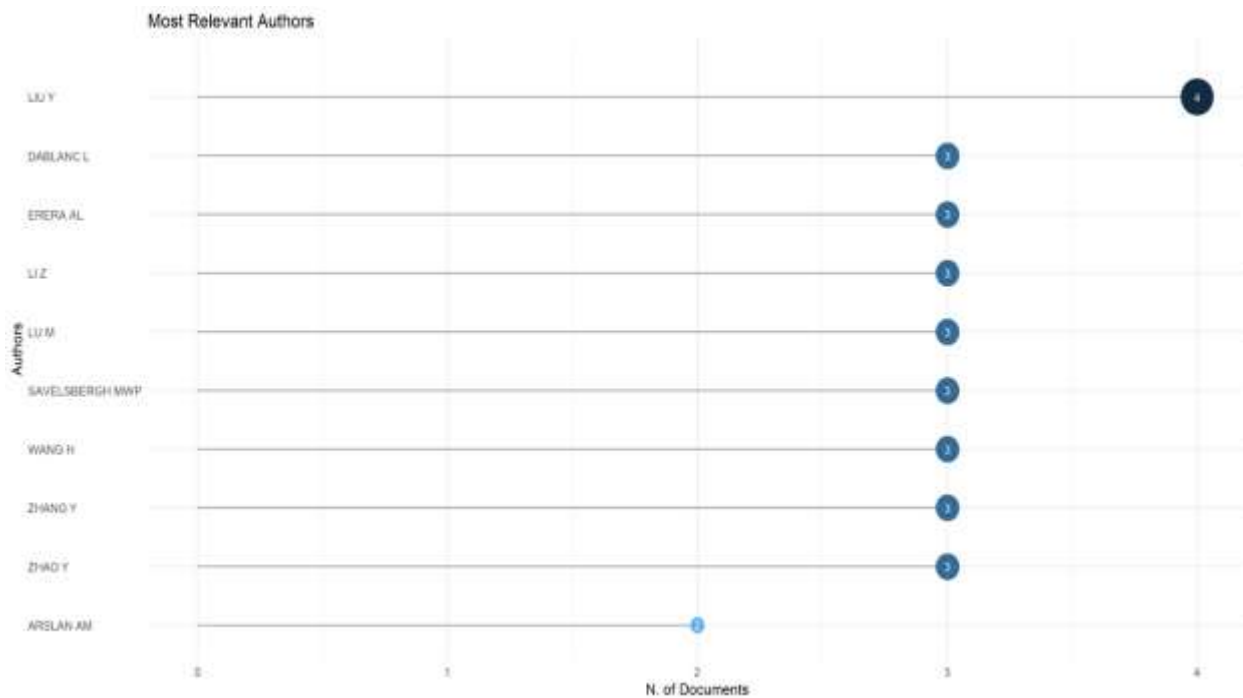
**Figure 2: Measure of key Journals**



### 6.3 Publication of Articles by Authors

Figure 3 presents the most relevant authors in the quick commerce literature based on their publication output. Liu Y records the highest contribution with 4 documents, indicating sustained engagement with the research domain. Several authors, including Dablanc L, Erera AL, Li Z, Lu M, Savelsbergh MWP, Wang H, Zhang Y, and Zhao Y, each contribute 3 publications, reflecting a group of consistently active contributors influencing the development of the field. Arslan AM contributes 2 publications and also appears among the notable authors. Overall, the distribution of publications suggests a moderately dispersed authorship pattern, with research output shared across multiple contributors rather than concentrated among a small number of authors. This pattern is consistent with collaborative research practices and indicates the presence of multiple research streams within the domain.

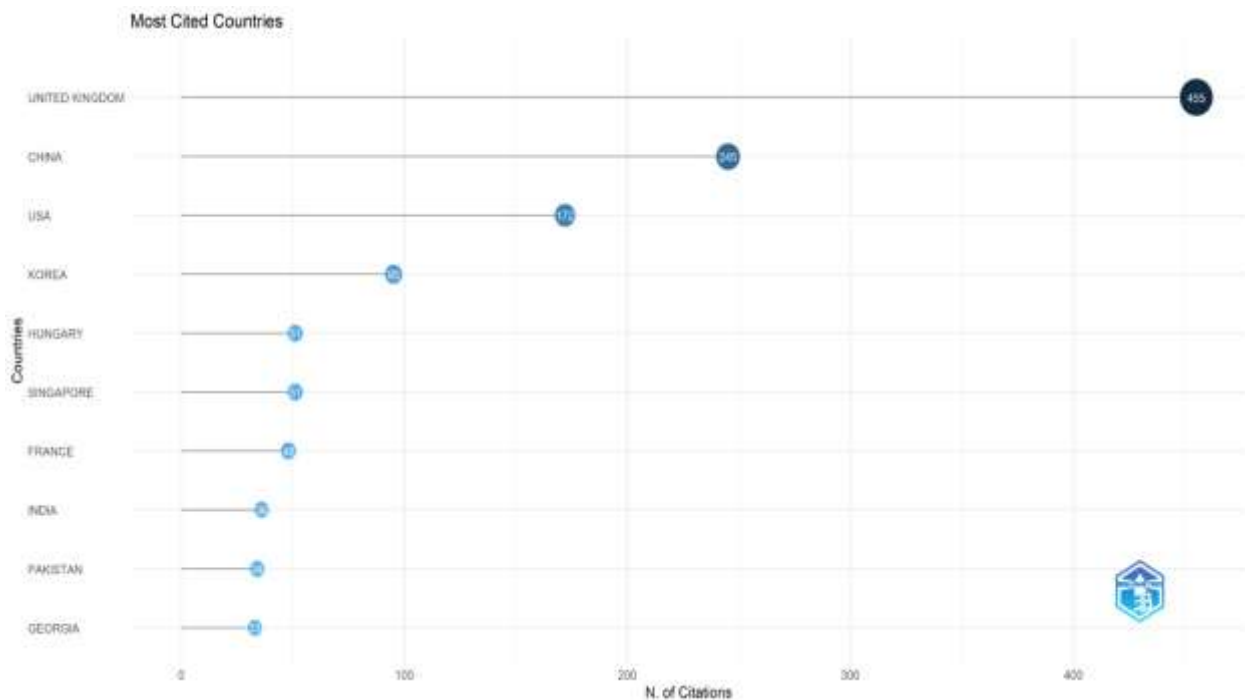
**Figure 3: Measure of key Authors**



#### 6.4 Publication of Articles by Countries

The citation distribution reveals a strongly concentrated global research landscape. The United Kingdom dominates with **455 citations**, demonstrating clear intellectual leadership and high international visibility. China follows with **245 citations**, reflecting its rapidly expanding scholarly influence, while the United States ranks third with **172 citations**, confirming its continued but comparatively lower impact in this field. A sharp decline is evident beyond the top three, with Korea contributing **95 citations**, indicating moderate influence. Hungary and Singapore each record **51 citations**, followed by France with **48 citations**, representing emerging yet limited impact. India (**36 citations**), Pakistan (**34 citations**), and Georgia (**33 citations**) exhibit relatively low citation visibility. Overall, the pattern underscores a highly centralized knowledge structure, where a small number of countries disproportionately shape the field’s intellectual development.

**Figure 4: Measure of key Contribution of Countries**



**Table 2: Total Citation of key Contributing Countries**

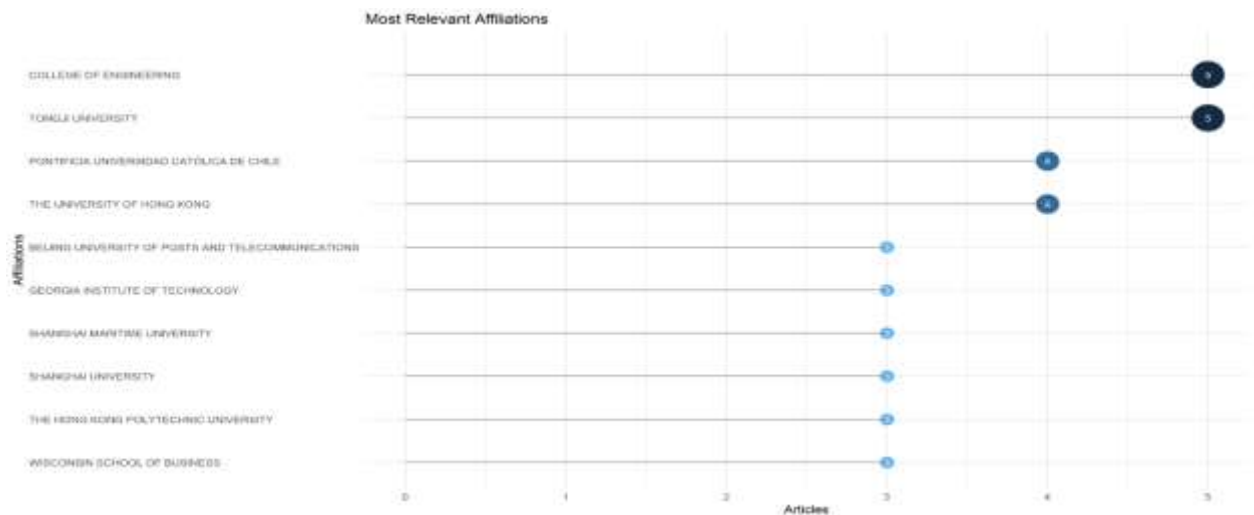
Country	TC	Average Article Citations
UNITED KINGDOM	455	227.50
CHINA	245	9.10
USA	172	10.80
KOREA	95	31.70
HUNGARY	51	51.00
SINGAPORE	51	51.00
FRANCE	48	16.00
INDIA	36	3.30
PAKISTAN	34	34.00
GEORGIA	33	16.50
NEW ZEALAND	30	30.00
CANADA	29	14.50
HONG KONG	27	6.80

CHILE	26	26.00
GERMANY	17	4.20
NETHERLANDS	15	15.00
MALAYSIA	10	5.00
TUNISIA	9	9.00
FINLAND	8	8.00
BRAZIL	7	3.50
BELGIUM	6	6.00
PORTUGAL	6	6.00
UKRAINE	4	4.00
THAILAND	3	1.50
AUSTRALIA	1	1.00

### 6.5 Publication of Articles by most relevant Affiliations

The figure shows how research output is distributed across institutions. The College of Engineering and Tongji University record the highest output, with 5 articles each, showing sustained involvement in the field. Pontificia Universidad Católica de Chile and The University of Hong Kong follow with 4 articles each, indicating regular research activity. Several other institutions, including Beijing University of Posts and Telecommunications, Georgia Institute of Technology, Shanghai Maritime University, Shanghai University, The Hong Kong Polytechnic University, and Wisconsin School of Business, each contribute 3 articles, reflecting a moderate level of participation. Overall, the results indicate that a small number of institutions account for a higher share of publications, while the remaining output is spread across multiple universities, suggesting a broad but uneven distribution of research contributions.

**Figure 5: Measure of key publication affiliations**

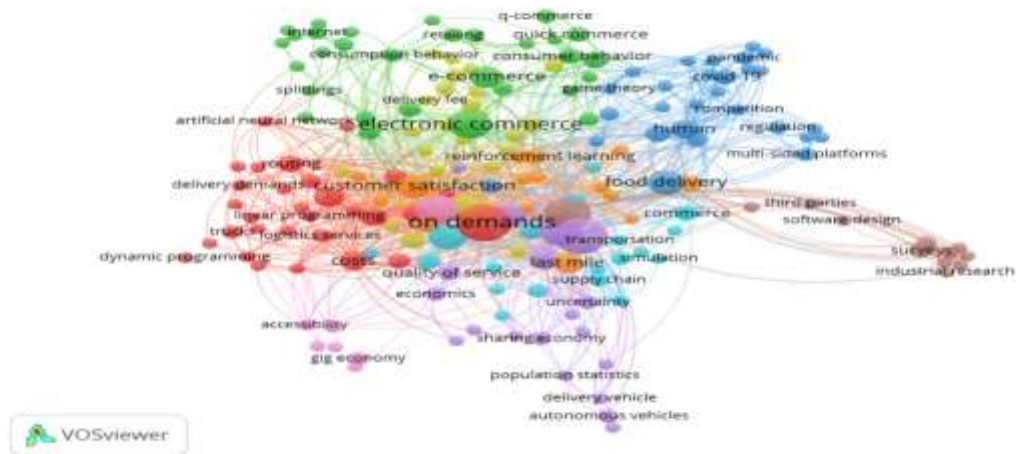


## 6.6 Network analysis and mapping

The keyword visualization depicts a research landscape that is strongly centered on on-demand delivery and electronic commerce, with sales, logistics, and instant delivery emerging as the dominant conceptual foundations. The prominence of these terms indicates that quick commerce research is primarily framed within demand-driven, platform-based retail systems. Closely associated themes such as service quality, customer satisfaction, and consumer behavior reflect an increasing scholarly focus on user-centric performance outcomes alongside operational considerations.

A major thematic concentration is observed around logistics optimization, as reflected by recurring terms related to vehicle routing, scheduling, cost structures, and last-mile delivery. This pattern highlights the literature's strong emphasis on efficiency enhancement and cost minimization under strict time constraints, supported by advanced analytical and algorithmic approaches. The frequent occurrence of food delivery further indicates that grocery and meal-





### 7.Recent Research Trend

(Cao et al., 2026)	Numerical results show that order exchange mechanisms enhance scheduling flexibility and welfare equity, while equity-oriented pricing strategies improve system efficiency and reduce operational costs. Based on these insights, the study proposes policy recommendations for instant delivery platforms to optimize rider and order management.
(Liang & Ke, 2025)	The study reviews order dispatching in on-demand delivery services, contrasting static models with dynamic approaches that better address real-world uncertainty. It demonstrates the effectiveness of dynamic modeling through an MDP framework incorporating multiple sources of uncertainty.
(Li et al., 2026)	The findings show that subsidy-only regulatory frameworks are unsustainable due to high costs, while mixed regulatory approaches are more effective. In particular, a fully integrated architecture combining commissions, penalties, and subsidies performs best, highlighting the need for continuous mixed regulation to manage rider compliance and delivery violations effectively.

(Zhao et al., 2026)	The findings indicate that a randomized PM strategy is not universally optimal for instant retail platforms and can influence pricing differently based on customer composition. While it often increases prices, it may also create a win-win outcome by improving platform profits and benefiting group-buying stores when customer acceptance conditions are favorable.
(Lebayle, 2025)	The analysis reveals that Deliveroo's costs are primarily variable, while revenues remain stable. Since 2022, stalled platform growth and limited reductions in courier pay, combined with rising inflation, have undermined the financial sustainability of delivery platforms.
(Huang et al., 2024)	The findings indicate that customer preferences for delivery price and cargo damage exhibit normal heterogeneity. Gender, privacy concerns, instant delivery usage frequency, and order price significantly shape preferences for ADVs, with positive interaction effects observed between delivery price, income, and service usage frequency. This study advances understanding of customer preferences for ADVs and informs logistics providers' targeting strategies.
(Mayya & Li, 2025)	Prior evidence shows that listing nonpartnered restaurants increases their monthly takeout revenue by approximately \$1,410 and generates positive spillover effects for partnered restaurants, whereas delisting results in revenue declines for both. These findings suggest that nonpartnered contracts, particularly for independent restaurants, have important implications for platform design and regulatory policies.
(Sahu et al., 2025)	This study identifies key determinants of Instant OFDS adoption, offering practical insights for marketers and service providers in the context of rapidly expanding e-commerce and improving logistics infrastructure. It also underscores the importance of service efficiency, convenience, timeliness, and quality in meeting customer expectations.

<p>(Liang et al., 2025)</p>	<p>The findings demonstrate reference-dependent preferences through asymmetric waiting-time effects on cancellations. Higher delivery fees reduce cancellations during matching but increase post-matching cancellations, while familiar drivers significantly lower cancellation risk. Cancellation likelihood also varies with waiting time across matching and pick-up stages, offering insights for pricing and matching strategies to improve on-demand service efficiency.</p>
<p>(Zhang et al., 2025)</p>	<p>Existing studies emphasize real-time accident detection to prevent secondary crashes, yet reliable detection across straight and curved roads remains challenging. A deep learning-based system using V2X vehicle trajectories, road geometry, and vehicle dynamics demonstrates robust real-time collision detection via edge computing. Simulation results show detection accuracy above 99% and classification accuracy exceeding 97% across multiple models, highlighting strong robustness across road types and locations and its potential to enhance traffic safety.</p>
<p>(Li &amp; Wang, 2025)</p>	<p>On-demand delivery platforms increase total restaurant sales and dine-in visits, but effects vary by restaurant type. Fast-food chains benefit far more, as platforms complement their takeout sales but substitute those of independent restaurants. Although dine-in demand rises similarly for both, independents gain mainly through dine-in visits. Increased price competition on platforms constrains independents' differentiation, limiting their overall benefits.</p>
<p>(Hilali &amp; Gharbi, 2026)</p>	<p>Findings indicate that Quick Commerce adoption in Tunisia was driven by pandemic-induced reliance on technology, moderated by trust and risk perceptions. Cultural norms and peer influence further shaped consumer behavior, while preferences for instant delivery became normalized. Additionally, Q-commerce contributed to emotional resilience during periods of uncertainty.</p>

<p><i>(Tyagi &amp; Kaur, 2026)</i></p>	<p>Q-commerce has evolved from early experimentation to pandemic-driven adoption and market consolidation, establishing ultra-fast delivery as a core retail model. While consumer demand reflects a convenience–cost trade-off, firms face sustainability and infrastructure challenges, prompting investments in green logistics, AI personalization, and autonomous last-mile solutions.</p>
<p><i>(Zhao et al., 2025)</i></p>	<p>The hybrid KG–GNN recommender significantly outperforms traditional methods by capturing complex urban–facility relationships, enabling more accurate and interpretable site selection. By integrating consumer feedback, it enhances transparency and supports human-centered O2O facility planning.</p>
<p><i>(He &amp; Zhen, 2025)</i></p>	<p>Results validate the efficiency and scalability of the proposed algorithm, showing that simply increasing couriers, drones, or stations does not guarantee better performance. Under tight delivery deadlines, drones yield greater benefits than couriers, highlighting the model’s robustness for large-scale applications.</p>
<p><i>(Mangudhla, 2025)</i></p>	<p>The study finds that sustainable e-commerce is driven by eco-friendly product curation, ethical sourcing, transparent supply chains, sustainable logistics, and AI-enabled personalization. Evidence from Patagonia, Etsy, and The RealReal demonstrates how these practices jointly enhance sustainability performance and consumer engagement.</p>
<p><i>(Peng &amp; Mun, 2025)</i></p>	<p>The study highlights guarded optimism about the gig economy’s long-term sustainability, driven by digital infrastructure growth, platform adaptability, and worker resilience. Nonetheless, regulatory rigidity, rising competition, and compliance burdens threaten viability, underscoring the need for flexible regulation, enhanced worker-support technologies, and coordinated public–private governance.</p>

<p>(Li &amp; Wang, 2021)</p>	<p>The study finds that commission fee caps prompt delivery platforms to adjust their strategies in ways that disadvantage independent restaurants. Following regulation, platforms reduce recommendations for independent outlets, promote chain restaurants, and raise consumer delivery fees to offset lost commission revenue.</p>
<p>(Görener, 2025)</p>	<p>The study develops new equations for multi-block rectangular warehouses that directly compute shortest travel distances between order points. Compared to conventional methods, the proposed approach yields more accurate results.</p>
<p>(Karulkar et al., 2025)</p>	<p>The study shows that quick commerce is now central to modern retail, with success driven by rapid market entry, operational agility, and competitive positioning. Zepto’s case illustrates how adaptive logistics and business strategies enabled firms to respond to pandemic-driven shifts in consumer behavior and sustain growth.</p>
<p>(Chen, Lee, &amp; Ho, 2026)</p>	<p>Drivers’ order acceptance is driven by potential earnings and expected idle time, with “hot zone” locations and higher pay rates increasing likelihood of acceptance. Order quality is mainly influenced by neighborhood locations and restaurant wait times.</p>
<p>(Vergara &amp; Barrett, 2025)</p>	<p>Private investment in South America’s agrifood tech sector has surged since 2007, yet remains uneven across countries, sectors, and technologies. This suggests that stimulating investment for agrifood transformation requires targeted, local, and technology-specific strategies.</p>
<p>(Zhang, Zheng, &amp; Tian, 2025)</p>	<p>The proposed algorithm outperforms Gurobi on small instances and other metaheuristics on large ones, demonstrating robust efficiency. Sensitivity analyses on station costs, moped range, and demand provide actionable insights for optimizing city logistics.</p>

(Darda, Gupta, & Patra, 2025)	The study identifies eight key drivers shaping Q-commerce adoption in India, showing how functional benefits and consumer behavior influence uptake. These insights offer guidance for scholars, businesses, and policymakers to enhance consumer engagement and develop the rapidly growing sector.
(Giannoudis, Xenou, Ayfantopoulou, & Voulkopoulos, 2024)	SEPEE (2022) finds that Greece’s fashion-textile industry suffered major losses during COVID-19, with a 30% drop in turnover and declining exports, particularly in men’s fashion. By 2021, exports rose 33.8% and domestic sales 43.4%, signaling recovery. Future growth will hinge on political support, pandemic effects, energy costs, and trends like fast fashion and just-in-time inventory.
(Park, Ha, & Campbell, 2025)	Functional (usage, value, risk) and psychological (tradition, image) barriers significantly drive consumer resistance to online grocery delivery, while individual characteristics shape these perceptions. The findings explain adoption hesitation and validate the extended model for ODGD behavior.
(Virmani & Anand, 2025)	Research on quick commerce grew steadily from 2000 to 2014 at 11.86% annually, reflecting its rising importance amid technological advances and Industry 4.0. Major contributions from Australia, the USA, Finland, India, and China highlight global interest and collaboration.

## 8. Discussion

The findings of this bibliometric study reveal that research on instant delivery services has evolved into a structured and multidimensional domain, with clear thematic convergence around on-demand fulfillment, digital commerce, and consumer-centric outcomes. The co-word analysis demonstrates that on-demand services function as the conceptual nucleus of the literature, strongly linked with electronic commerce, quick commerce, consumer behavior, and customer satisfaction. This centrality indicates that instant delivery is no longer treated as a peripheral logistics function but as a core component of contemporary digital retail ecosystems. The prominence of consumer satisfaction and behavior-related keywords

suggests that speed, convenience, and service reliability are dominant value drivers shaping both platform strategies and scholarly inquiry.

Operational efficiency emerges as a second major pillar of the literature. The strong clustering of routing, logistics services, costs, linear and dynamic programming, and artificial intelligence techniques reflects a sustained emphasis on optimizing last-mile delivery under stringent time constraints. These themes align with the operational realities of instant delivery platforms, where marginal improvements in routing, demand forecasting, and fleet utilization significantly affect cost structures and service quality. The close integration of these operational themes with customer satisfaction further indicates that efficiency-oriented research is increasingly framed through a service performance lens rather than purely technical optimization.

A distinct yet interconnected stream focuses on food delivery, supply chains, transportation, simulation, and uncertainty, highlighting the complexity of coordinating time-sensitive delivery networks. The recurrence of uncertainty and simulation-based approaches underscores the volatile nature of demand, rider availability, and urban traffic conditions inherent in instant delivery systems. Moreover, the presence of pandemic-related keywords alongside regulation, competition, and multi-sided platforms reflects a growing scholarly recognition of institutional and societal forces shaping the sector. The COVID-19 pandemic appears to have acted as a structural shock, accelerating adoption while simultaneously raising concerns related to platform governance, labor conditions, and regulatory oversight.

Emerging themes such as reinforcement learning, autonomous vehicles, the gig economy, and the sharing economy signal a forward-looking research agenda. These topics suggest a gradual shift toward intelligent, automated, and hybrid labor–technology models in instant delivery services. Collectively, the discussion indicates that the literature has moved beyond descriptive growth narratives toward an integrated examination of technological, operational, behavioral, and regulatory dimensions, marking the transition of instant delivery research into a mature yet rapidly evolving field.

## 9. Conclusion

This study provides a comprehensive bibliometric mapping of instant delivery services research using Scopus-indexed publications and advanced visualization tools. The results

confirm that instant delivery has emerged as a central and strategically significant extension of electronic commerce, driven by consumer demand for immediacy and supported by rapid technological advancement. The co-word analysis reveals a well-defined intellectual structure, with on-demand services anchoring multiple interconnected research streams encompassing consumer behavior, operational optimization, supply chain coordination, and platform governance.

The findings highlight that scholarly attention is no longer fragmented but increasingly convergent, reflecting the consolidation of instant delivery as a core research domain within e-commerce and logistics studies. While efficiency and last-mile optimization dominate existing research, the growing presence of regulatory, labor, and sustainability-related themes indicates a broadening of analytical perspectives. Overall, this study contributes to the literature by systematically organizing the thematic evolution of instant delivery research, identifying dominant and emerging areas, and offering a structured foundation for future theoretical and empirical inquiry, particularly in developing economy contexts such as India.

## **10. Implications**

### **Theoretical Implications**

This study advances the theoretical understanding of instant delivery services by positioning them as an integrated socio-technical system rather than a narrowly defined logistics function. The identified convergence of consumer behavior, operational optimization, and platform governance suggests the need for interdisciplinary theoretical frameworks that bridge operations management, digital platform theory, and consumer research. The emergence of intelligent systems and gig-based labor models also opens avenues for extending existing theories related to algorithmic management, service quality, and platform-mediated work.

### **Managerial Implications**

For practitioners, the findings underscore the critical importance of aligning operational efficiency with customer experience. Investments in routing optimization, demand forecasting, and AI-driven decision systems directly influence service quality and customer satisfaction. The growing relevance of regulatory and labor-related themes highlights the need for platform managers to adopt sustainable workforce strategies and transparent

governance mechanisms. Firms that balance speed, cost efficiency, and worker well-being are more likely to achieve long-term viability in the highly competitive instant delivery market.

### **Policy Implications**

From a policy perspective, the results indicate that instant delivery platforms operate at the intersection of commerce, labor, and urban infrastructure. Regulators must move beyond reactive interventions and develop adaptive frameworks that address pricing practices, labor protections, and data-driven decision-making. The increasing role of instant delivery in urban consumption patterns also calls for coordinated policies related to traffic management, environmental sustainability, and micro-fulfillment infrastructure planning, particularly in rapidly urbanizing economies.

### **Research Implications**

The limited number of review studies identified in the dataset suggests substantial scope for future integrative and longitudinal research. Empirical studies focusing on emerging markets, spatial impacts of micro-fulfillment centers, and sustainability trade-offs remain underexplored. Additionally, the growing prominence of autonomous delivery and reinforcement learning highlights the need for research examining ethical, regulatory, and societal implications of automation in instant delivery ecosystems.

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