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Mapping Research Trends in Digital Payment and Consumer Buying Behaviour: A Bibliometric Approach

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Abstract

The Bibliometric Exploration study examines the evolution of research in the area of Digital Payments and Consumer Buying Behaviour using metadata collected from Scopus, analysed through VOS viewer. The data included covers the period from 1989 to 2025. The study produced several key findings: There has been an explosion of research publications since 2020, with India making the most output at 44.55%, along with clusters of growing contributions emerging from Indonesia and the United States, while the highest number of citations for high-impact research is coming from countries such as Saudi Arabia and Jordan. The bibliometric analysis indicated that within the keyword groups, "Digital Payment Systems" and "Online Payments" are the most dominant themes, along with increased usage of theTechnology Adoption Model (TAM), Unified Theory of Acceptance and Use of Technology (UTAUT) and Security, Perceived Risk, UPI, along with COVID19. The Citations metrics were moderate (10.39 citations per article; H-index 14), There are many prolific authors publishing a number of influential multi-paper articles, there is a higher number of Journal Articles being published than Review Articles, however, indicating that the discipline is developing but is still somewhat disjointed. These results indicate the structure of the intellectual landscape of the research area; demonstrate how there is a concentration of Geographical Productivity and as a result Islands of Impact are forming within the discipline, and that there remain significant gaps in research looking at Consumer Behaviour in relation to Fintech Digital Payment Systems. Therefore, the Bibliometric Exploration research could help researchers in developing

future studies that focus on how Fintech Digital Payment Systems will influence Impulse Purchasing and Inclusion Buying Patterns in future Emerging Markets.

Keywords: Digital Payments, Consumer Behaviour, Bibliometric Analysis, Technology Adoption, Fintech, VOS viewer.

Introduction

The rapid digitization of financial services over the past decade has transformed consumer payment behaviours across the globe, with digital payment systems such as Unified Payments Interface (UPI), mobile wallets, and online banking playing a pivotal role in shaping how consumers transact. This shift is particularly pronounced in emerging markets, where fintech innovations have accelerated financial inclusion and altered traditional buying patterns. Understanding the relationship between digital payments and consumer buying behaviour has thus become a critical research focus within commerce, business management, and technology adoption studies.

Despite growing interest, the field remains fragmented with diverse scholarly contributions scattered across multiple disciplines. Bibliometric analysis offers a powerful lens to systematically map the evolution, intellectual structure, and thematic trends of this research domain, providing a comprehensive overview of influential works, prolific authors, and dominant countries contributing to the knowledge base. Metadata sourced from Scopus and analyzed via VOS viewer enables the identification of research hotspots and gaps, helping scholars and practitioners discern patterns and future directions.

The study aims to deliver bibliometric insights into research trends on digital payments and consumer buying behaviour from 1989 to 2025, highlighting the surge in publications post-2020, the geographical concentration of productivity, and the diversity of influential contributions. By elucidating thematic emphases such as technology adoption models, security concerns, and consumer trust, the study contributes a synthesized understanding of how digital payment innovations continue to redefine consumer markets in a rapidly evolving fintech landscape.

Literature Review

Digital Payment Systems: The research scope of Digital Payment Systems (DPS) encompasses mobile payment systems, online banking systems, Point of Sale (POS), and mobile wallets in addition to the efficiency, security, and accessibility provided by DPS. Recent developments in

current academic research on DPS include a growing interest in how the integration of technological advancements can improve transparency and enhance security through technologies like Blockchain and the Internet of Things (IoT) (Kesavan, 2023). Additionally, current research from developing countries such as Indonesia indicates that many developing economies will benefit from DPS to facilitate the development of their digital economies and promote Micro, Small, and Medium-Sized Enterprises (MSMEs) (Maharsi, 2024). Furthermore, the DPS literature addresses user data management, personalisation, and consent-based security design (Shahid, 2019).

Consumer Buying Behaviour: The emergence of digital payment systems is changing consumer purchase behaviour. Consumers have more access to a wider array of payment options than ever before due to the rapid evolution of these platforms and their superior usability compared with traditional forms of transaction processing. The convenience associated with these platforms also adds to the propensity for impulsive purchase patterns as the instantaneous nature of digital transactions allows for the completion of a transaction without the need to hold cash (Yousef, 2024). The added convenience and speed of digital payment systems have the potential to increase the number of purchases made (Jakati et al., 2025). While digital payment systems make it easier to perform monetary transfers, they also encourage consumers to engage in impulse buying behaviours. Jakati et al. (2025) and Yousef (2024) have concluded that one of the risks associated with using these payment systems is overspending, as consumers are likely to make unplanned purchases more frequently due to the ease of using the digital platforms. In addition to supporting consumers in keeping track of their finances and budgeting, digital payment systems also contribute to increased levels of impulse buying due to the decreased physicality associated with transferring money.

Impact of COVID-19: The COVID 19 epidemic catalyzed the widespread implementation and use of electronic payment systems globally; with particular emphasis placed on their impact in India. Consumers were encouraged by the requirement for physical distancing and minimization of contact to use electronic forms of payment instead of cash for the perceived safety of transactions (Choudhary et al., 2024; Irfan et al., 2024). The growth of these electronic modes of payment was due to health concerns and government backed initiatives as well as the need for contactless transactions that arose as a result of lockdowns. Many government initiatives such as Digital India and other supportive regulatory measures led to the creation of an ecosystem in which electronic financial systems are accepted (Choudhary et al., 2024).

The evolution shows a change in Consumer Behaviour and is not simply a short-term reaction; due to the availability of improved access to mobile devices, and growth of internet connectivity as well as the increased familiarity with electronic means of payment (Baviskar et al., 2023). Among the many forms of electronic payments, the Unified Payments Interface (UPI) became the leading payment type with an increase in both transaction volume and value during the pandemic (Impact Assessment of the Pandemic on India's Digital Payment Ecosystem, 2022). By having more consumers using electronic payments to buy household goods and services, there has also been an increased acceptance of electronic payments across multiple demographic groups (Baviskar et al., 2023).

Methods

Data Collection:

The study employs bibliometric analysis to map research trends on digital payments and consumer buying behaviour. Metadata was retrieved from Scopus database on, using search strings such as "digital payment" OR "online payment" AND "consumer behaviour" OR "buying behaviour". The final dataset comprises 101 documents published between 1989 and 2025, including articles, conference papers, reviews, and book chapters

Data Analysis Tools:

Bibliometric mapping and visualization were conducted using VOS viewer software. It facilitated network analysis of co-authorship, co-citation, and keyword co-occurrence, with parameters set to minimum 2 occurrences for keywords and authors because of limited paper count. Descriptive statistics (publication trends, citations, h-index) were extracted directly from Scopus and supplemented with VOS viewer overlays for temporal and citation impact visualization.

Analytical Framework:

Quantitative metrics examined include the yearly number of publications, productivity and citation impact by country, number of productive authors, and frequency distributions of keywords. Thematic structures were established through network clusters created with VOS viewer, and citation indicators (10.39 citations/paper, h-index 14) represented the degree of influence of the research. The systematic approach provides complete mapping of the intellectual and social framework of the discipline.

Analysis and Discussions

Table – 1 Types of Documents

Document Type	Total Publications	Percentage
Article	58	58
Conference	24	23
Book Chapter	16	16
Review	3	3
	101	100

The dataset is dominated by journal articles (58%) followed by conference papers (23%) and book chapters (16%), while review papers form only 3% of the total 101 publications. It indicates that the field is still driven mainly by empirical or conceptual primary studies, with relatively few comprehensive reviews synthesizing existing knowledge on digital payments and consumer behaviour.

Table – 2 Publication by Year

Year	No. of Publications
2025	32
2024	21
2023	15
2022	9
2021	5
2020	10
2019	4
2017	1
2011	1
2007	1
2000	1
1989	1

The annual output shows a sharp rise in publications after 2020, peaking at 32 papers in 2025 and 21 in 2024, compared with fewer than 10 papers per year before 2022. The growth pattern suggests that research on digital payment systems and their impact on consumer behaviour has accelerated markedly in the post-pandemic and recent fintech expansion period, reflecting increasing academic and practical interest in the topic. The below chart shows the increasing growth trend of publication on Digital payment.

Figure – 1 Growth Pattern of Publications over the Years

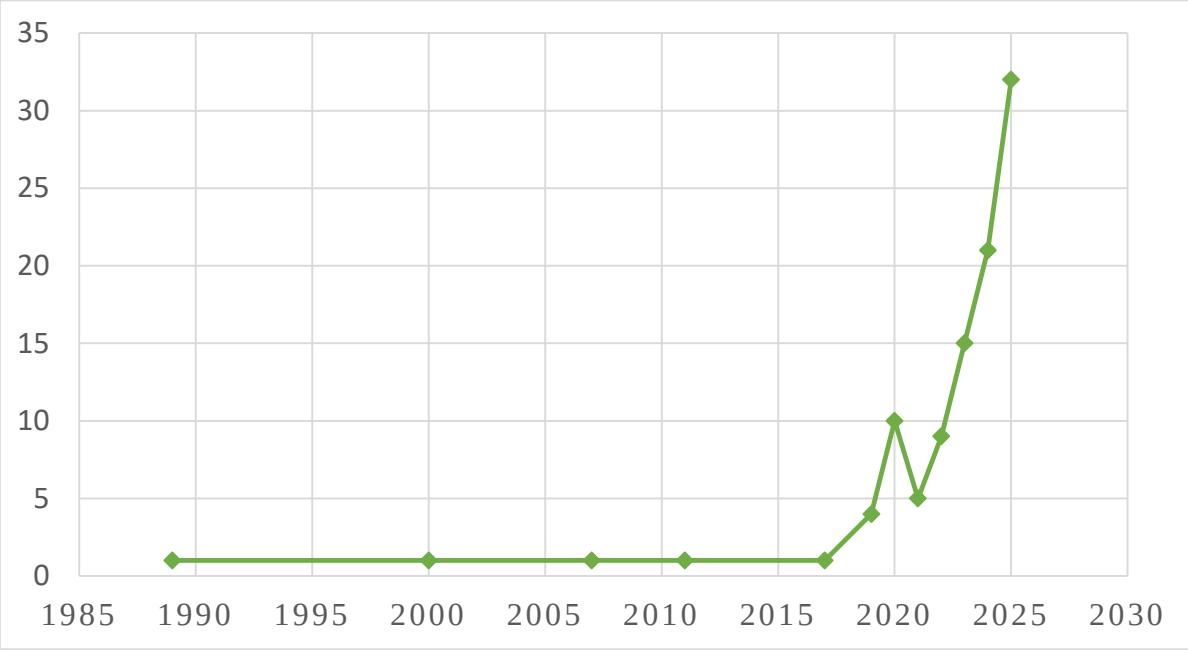
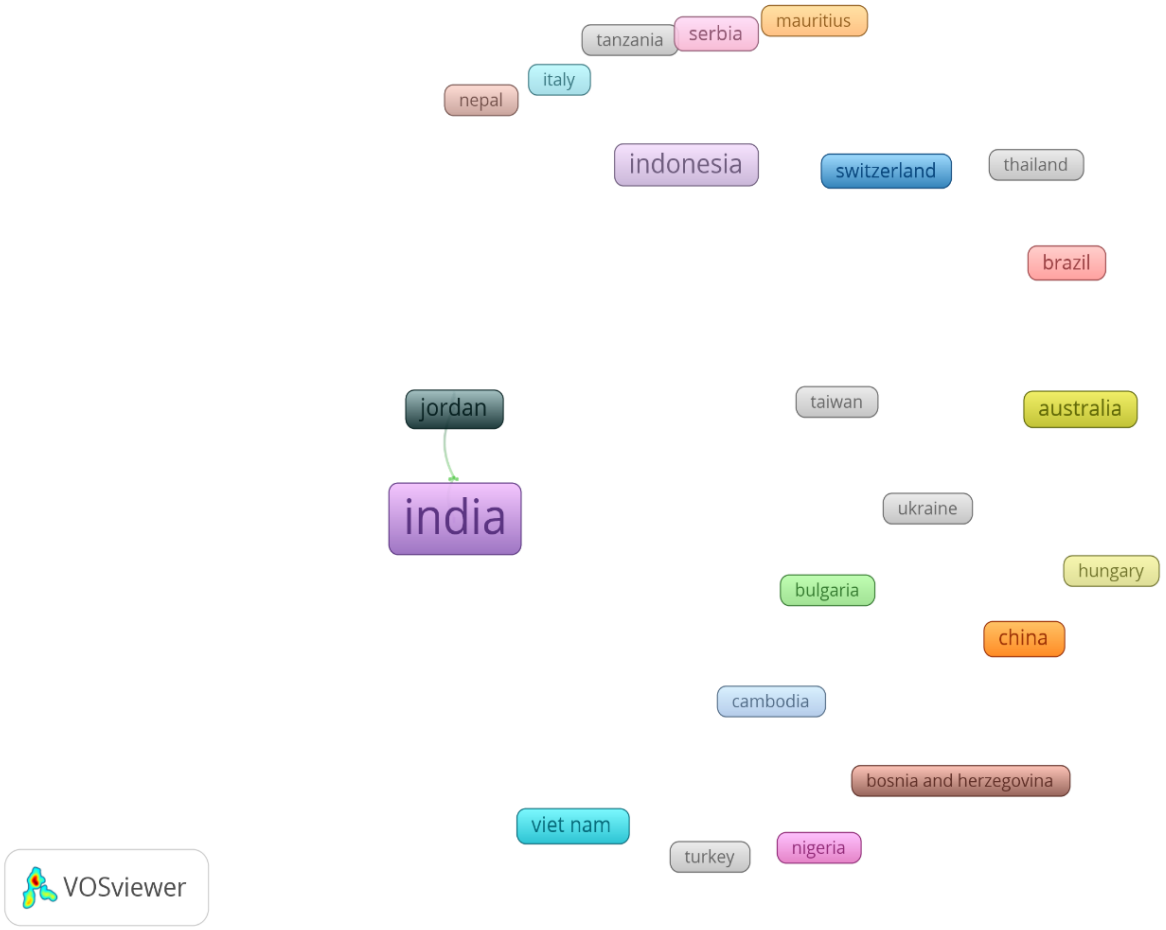


Table – 3 Country Publication Contribution

Country	Publication Count	Percentage
India	45	44.55
Indonesia	9	8.91
United states	6	5.94
Jordan	5	4.95
Australia	4	3.96
Canada	3	2.97
Malysia	3	2.97
Vietnam	3	2.97
China	3	2.97
Russian Federation	3	2.97
Switzerland	2	1.98
United Arab Emirates	2	1.98
Serbia	2	1.98
Pakistan	2	1.98
United Kingdom	2	1.98
Brazil	2	1.980

Figure 2 Country Distribution Map



India contributes the highest number of publications (44.55%), far ahead of Indonesia (8.91%) and the United States (5.94%), while several other countries appear with only 2–4 papers each. Countries such as Bangladesh, France, Japan, Peru, Sweden, Uganda, Yemen, Bahrain, Bosnia & Herzegovina, Croatia, Finland, Germany, Nigeria, Oman, Pakistan, Saudi Arabia, South Africa, Bulgaria, Cambodia, Hungary, Italy, Mauritius, Nepal, Serbia, Taiwan, Tanzania, Thailand, Turkey and Ukraine contributed one publication count. The distribution shows that research on digital payments and consumer behaviour is highly concentrated in India and, more broadly, in emerging economies, with relatively dispersed contributions from a wide range of other countries.

Table – 4 Country-wise publication and citation impact

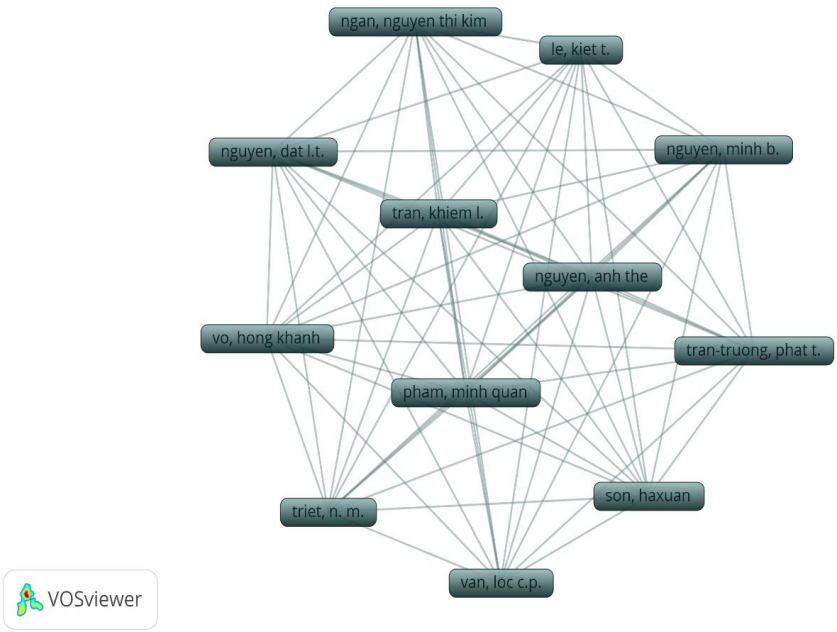
Country	Documents	Citations	Citation per Document	Share of total Documents	Share of total Citations
India	45	370	8.22	44.55	0.78
Indonesia	9	132	14.67	8.91	1.40
Jordan	5	195	39	4.95	3.71
Saudi Arabia	1	150	150	0.99	14.29
United states	6	55	9.17	5.94	0.87
Thailand	1	59	59	0.99	5.62
Pakistan	1	47	47	0.99	4.48
Malysia	3	45	15	2.97	1.43
Switzerland	1	32	32	0.99	3.048
Yemen	1	29	29	0.99	2.76
United Arab Emirates	1	29	29	0.99	2.76
Germany	1	27	27	0.99	2.57
China	3	26	8.67	2.97	0.83
Taiwan	1	22	22	0.99	2.10
Australia	4	18	4.5	3.96	0.43
Ukraine	1	18	18	0.99	1.71
United Kingdom	1	11	11	0.99	1.05
Turkey	1	10	10	0.99	0.95

The pattern indicates that while India shapes the quantitative output of the field with 45 documents (44.55% share), highly influential work also originates from a small number of studies in other countries like Saudi Arabia (150 citations from 1 paper) and Jordan (39 citations per document), suggesting both geographical concentration in productivity and geographical diversity in impact. For digital payments research, it highlights India's dominance in volume likely driven by its massive UPI and fintech adoption context but underscores that breakthrough insights on consumer behaviour often come from targeted, high-impact contributions elsewhere, enriching global perspectives.

Table – 5 Prolific Authors Table (Based on No. of Documents Published)

Author Name	Documents	Citations	Average Citations per Paper
Cui,Hui	2	18	9
Norbu, Tenzin	2	18	9
Park, Joo yeon	2	18	9
Wong, Kok wai	2	18	9
Kumar, Anoop	2	0	-
Parihar, Anil Singh	2	0	-
Al-Okaily, Manaf	2	179	89.5
Banerjee, Ameet Kumar	2	9	4.5
Ilankumar, G.	2	9	4.5

Figure 3 Author Collaboration Map

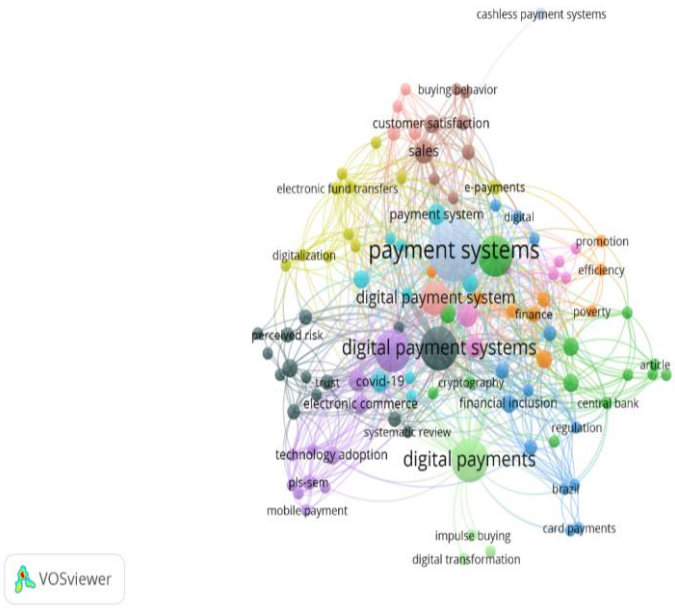


The list of prolific authors shows several researchers with two publications each, such as Cui Hui, Norbu Tenzin, Park Joo Yeon and others, with notable variation in average citations per paper. For example, some authors (e.g., Al-Okaily, Manaf) combine multiple papers with very high citation averages, indicating that a small group of scholars not only publish repeatedly in this domain but also produce highly influential work that shapes the intellectual structure of digital payment research.

Table – 6 Keyword Analysis

Keywords	Total Count	Percentage
Digital Payment Systems	101	41.74
Online Payment	52	21.49
Consumer Buying Behaviour	12	4.96
Digital Transformation of Payments	18	7.44
Security & Privacy	11	4.55
Technology adoption	4	1.65
Fintech	4	1.65
TAM	5	2.07
UTAUT	5	2.07
Covid 19	5	2.07
Perceived ease of use	4	1.65
Perceived risk	3	1.24
Trust	3	1.24
Social Influence	3	1.24
Regulation	2	0.83
User Experience	2	0.83
Digital Financial Inclusion	2	0.83
Perceived usefulness	2	0.83
UPI	2	0.83
Impulse Buying	2	0.83

Figure 4 Key word Network Map



The keyword analysis reveals that “Digital Payment Systems” and related terms such as “Online Payment” account for the largest share of occurrences (around 41.74% and 21.49%), while more specific consumer-behaviour constructs like “Consumer Buying Behaviour”, “Security & Privacy”, and “Technology Adoption” appear less frequently. It suggests that the literature is still primarily oriented around the general phenomenon of digital payments, with comparatively fewer studies deeply engaging with behavioural theories (e.g., TAM, UTAUT, perceived risk, trust, social influence, impulse buying) and consumer-centric outcomes, pointing to potential gaps for future research.

Table – 7 Citation Metrics

Metrics	Data
Papers	101
Number of Citations	1050
Years	37
Citations per Year	28.38
Citations per Paper	10.39
Citations per Author	3.30
Papers per Author	0.32
Authors per Paper	3.16
h-index	14
g-index	31

The overall citation metrics show that 101 papers published over 37 years have received 1,050 citations, yielding about 10.39 citations per paper and 28.38 citations per year. With an h-index of 14 and g-index of 31, the dataset indicates a moderately mature but still evolving research domain in which a subset of papers attracts substantial attention, while many others receive modest citations, consistent with a field that has expanded rapidly in recent years but is still consolidating its core theoretical and empirical contributions.

Conclusion

By analysing the results of the study, it has become evident that while the existing body of knowledge regarding digital payment systems is dominated by foundational themes, such as Technology Acceptance Models (TAM, UTAUT), security and privacy concerns, and consumer

trust, researchers should also design future studies that directly address the empirical impacts of digital payments on consumer buying behaviours. The lack of empirical studies that are focused on understanding the complex interactions between digital payment system usage (e.g., UPI and mobile wallets) and their relationship with impulse buying behaviours, frequency of purchases, and overall spending thresholds is an area of research that is in dire need of further exploration. By systematically reviewing the available literature, the study contributes to the development of a structured approach to further empirical studies related to the ways that digital payment systems affect consumer behaviours and the implication of this research for developing countries globally, as well as developed countries.

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