

Insights on Generation-Z Consumer Behavior in E-Commerce: A Bibliometric Analysis

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Abstract

The rapid evolution of e-commerce has significantly influenced consumer behavior, particularly among Generation Z, the cohort born between the mid-1990s and early 2010s. This study aims to investigate the advancements in e-commerce, consumer behavior, and the z-generation to help academics identify new areas of interest and generate fresh perspectives for future research in this area. The study's data was retrieved from the SCOPUS database, and its analysis was carried out using R studio and VOS viewer. Thematic mapping, topic trends, co-occurrence, and Tree-Map analysis are also shown within this domain. The data set included the years 1990 through 2023. Our analysis reveals that the initial nine papers were published in 1996. However, there was a decrease in publications in 1998, which can be considered the lowest point in terms of the quantity of publications in this area. From 2000 to 2023, the number of publications gradually increased. There is a strong correlation between decision-making, website traffic, e-commerce, electronic commerce, marketing, decision-making processes, consumer behavior, and patron behavior on the Internet. Using these keywords will help academics in the future have a better grasp of Generation Z's e-commerce habits and provide a more comprehensive description of the associated bodily knowledge. Additionally, There are several topic trends related to Generation-Z consumer behaviour in E-commerce such as innovation, research work, technology adoption, consumption behaviour, perception, and marketing.

Keywords: Generation- Z, Consumer Behavior, E-commerce, R studio, Vos Viewer

1) Introduction

The significant growth of e-commerce in recent years can be linked to the widespread adoption of mobile technology and the availability of information on the Internet. In recent years, many well-known e-commerce platforms have entered the realm of online transactions. These platforms include Amazon, eBay, and JD (Miller et al., 2013; Paavo et al., 2015). The E-commerce Platform Supply Chains (EPSCs) consist of the platforms themselves and the vendors they collaborate with. EPSCs utilize two distinct types of e-commerce platforms: resale platforms, which function as merchants, and platform selling platforms, which serve as marketplaces for manufacturers and collect a specific share of revenue-sharing (Kolk & Pinkse, 2004; Sai & Pinapati, 2023).

firm must possess both Internet connectivity and information technology infrastructure, such as electronic data interchange (EDI). E-commerce, within the realm of the Internet, pertains to the direct exchange of goods or services to clients through an online vendor's website (Ahmad et al., 2023; Li et al., 2022; Tu et al., 2023). To streamline transactions performed using a credit card, debit card, or electronic fund transfer (EFT), the gateway employs a wireless shopping cart or a similar purchasing tool (Gabriela & Buchko, 2021).

The average individual belonging to Generation Z, also known as digital natives (Seemiller & Grace, 2017). The classification of generations is extensively addressed in multiple sources. Five main trends can be observed (Grace-Bridges, 2019). People born after 1995 are considered part of Generation Z since they have not yet been through everything that our planet has to offer (Christina, 2016). Generation Z individuals comprise a substantial proportion of

the player population and demonstrate traits such as being technologically proficient, adept at making prompt decisions, and strongly interconnected (Turner, 2015).

Generation Z, characterized by their digital nativity and unique consumption patterns, presents distinct challenges and opportunities for e-commerce businesses. Despite their significant market presence, there is limited comprehensive understanding of their online purchasing behaviors, preferences and decision-making processes. Existing Studies are fragmented, lacking a cohesive bibliometric analysis that synthesizes key trends and research gaps. Therefore, a systematic bibliometric analysis of generation Z consumer behavior in E-commerce is essential to provide actionable insights for researchers and practitioners.

2) Literature review

Due to the Internet's global reach, customers can engage in the global economy, enabling them to compare costs across different locations, see price fluctuations based on demand, and get knowledge about potential alternatives (Cilliers, 2017). The buyers have a significant advantage (Moore et al., 2017). As a result of the transparency of the market, customers can easily compare the e-commerce products of various websites (Christina, 2016; Cilliers, 2017).. If consumers are not satisfied with certain e-goods, the pricing of materials, or the services offered, they can make adjustments even more swiftly than they would in traditional terms (Mohr & Mohr, 2016). Technological advancements, together with instances of violence, economic instability, and social justice movements, have profoundly influenced Generation Z. Even though people of past generations have also experienced similar problems, the historical backdrop of these individuals is significantly more profound than that of members of Generation Z (Seemiller & Grace, 2017).

Generation Z youth have unparalleled access to a wealth of knowledge compared to previous generations, thanks to their use of cell phones, home broadband Internet access, and online connectivity at school (Turner, 2015). kids have learned to respect privacy when using devices and technologies (Christina, 2016). Persons of Generation Z, sometimes called the "I-generation," "net-gen," or "digital natives," were born between the middle of the 1990s and the end of the 2010s (Cilliers, 2017).

Generation Z youth are exposed to media more frequently than any other activity, except for sleeping (Grace-Bridges, 2019). the transformation of the smartphone platform, which enables the transmission of multimedia content, played a key role in the increased amount of time spent on electronic devices (Csobanka, 2016). From economic and financial aspects, the younger members of Generation Z have experienced the impact of the widening income disparity and the diminishing middle-class (Seemiller & Grace, 2017). The economic difficulties experienced by numerous Generation Z individuals in their households may have instilled in them a strong awareness of the significance of money, therefore making saving a top priority for them (Turner, 2015).

E-commerce refers to the process of doing business transactions over the Internet, making use of technologies like Electronic Data Interchange (Barnes & Vidgen, 2002). Users can pay using a variety of methods, including major credit cards, debit cards, and electronic fund transfers (EFTs), all using the website's digital shopping cart system (Tian & Ge, 2011). An essential obstacle faced by e-commerce organizations is comprehending customer demands and subsequently enhancing their online presence and internal operations (Burt & Sparks, 2003). Consumers worldwide have enthusiastically embraced these opportunities (Jain et al., 2021). The influence of e-commerce is already apparent in other areas of business, including customer service and the advancement of innovative products (Barnes & Vidgen, 2002). India has substantial opportunities for growth through the implementation of e-commerce (Tian & Ge, 2011). In contrast, mobile commerce (m-commerce) is undergoing substantial expansion as a dependable and secure supplement to the e-commerce industry (Burt & Sparks, 2003).

Consumers are those who purchase goods or services either for personal use or to fulfill the needs of their family and household (Grace-Bridges, 2019). The information encompasses the items purchased, the reasons behind the purchases, the timing and location of the purchases, the frequency of purchases, and the frequency of usage (Ahmad et al., 2023). Forecasting consumer behavior in a specific scenario is exceedingly challenging due to its inherent unpredictability (K. Peattie & L. Moutinho, 2000). The outcome of this endeavour is crucial in determining the distinction between the success and failure of marketing endeavours, or even the entire firm itself (Dennis et al., 2009). Behavior principles play

a crucial role in its theoretical and empirical research (Fraj & Martinez, 2007). Furthermore, the predominant focus of consumer researchers and marketing scientists in explaining and forecasting consumer behavior remains primarily centered on cognitive aspects. (Stávková et al., 2008).

Bibliometric analysis emerged in the 1960s as a method to objectively assess the historical importance of a research topic and predict future patterns in development, research output, and collaborations (Ahmad et al., 2023; Lim, Kumar, et al., 2022). This method provides a quantitative analysis of bibliographic data by capturing key attributes of literature content, such as the title, authors, publication year, issuing institution, project funding, and published venues. These metrics exhibit temporal fluctuations utilizing accurate and validated methodologies (Gan et al., 2022; Kumar, Sahoo, et al., 2022; Pandey et al., 2023). The Mapping Knowledge Domains (MKD) methodology, developed almost two decades ago, employs a diverse array of disciplines including metrology, applied mathematics, information science, computer science, and graphics (Ceipek et al., 2019). The primary aim is to examine the relationships between different units of scientific knowledge. Published scientific research commonly presents information in either graphical representations or knowledge maps (Kaurav & Gupta, 2022; Kumar, Sharma, et al., 2022; Sri Sai & Pinapati, 2023; Zairbani & Jaya Prakash, 2023).

Facilitating the flow of knowledge across different domains is imperative due to the expanding quantity of research publications (Danese et al., 2018; Lim, Kumar, et al., 2022). Researchers increasingly recognize the legitimacy of integrating bibliometric analysis with MKD as a methodology (Mukherjee et al., 2022; Palmatier et al., 2018; Sai & Pinapati, 2023). Academics are increasingly recognizing the value of this technique in selecting topics for systematic reviews, and trials, and for journal editors to identify emergent ideas (Chandra et al., 2022; Db & Kumar, 2023; Lim, Rasul, et al., 2022; Valenzuela-Fernández & Escobar-Farfán, 2022).

The literature review on Generation Z consumer behavior in e-commerce highlights their preference for personalized and technologically advanced shopping experiences, often facilitated by mobile and social commerce. Generation Z consumers exhibit strong brand loyalty. Additionally, their propensity for quick decision-making and high expectations for seamless, multi-platform integration are critical factors shaping their online shopping habits.

The purpose of the study is to explore the improvement in z-generation, e-commerce, and consumer behavior to assist researchers in gaining new awareness and detecting emerging growth areas for further research in this field by the following research questions.

RQ1. What is the publication and citation performance regarding the factors that influence the behaviour of Generation Z consumers in the field of e-commerce?

RQ2. Which authors, topic trends, and most cited documents in Generation Z's consumer behaviour in the field of e-commerce?

RQ3. What is the relationship between fundamental themes, authors, and sources in antecedents and precedents of the patron behaviour of Generation Z in the area of e-commerce?

3) Methodology

This paper employed bibliometric analysis using R Studio and VOS viewer software in this study. The base data was acquired from the Scopus database and employed the terms "Consumer behavior," "Generation Z," and "E-commerce." Following a keyword search and before implementing the exclusion criteria, 9,123 publications are obtained. Subsequently, implemented exclusion criteria: The time frame for the study is from 1990 to 2024, focusing on business, management, and accounting. The document type is an article, and it is in its final publication stage. The source type is a journal, and the language used is English. By employing these criteria, 7072 papers were considered. The data is retrieved from Scopus, encompassing citation particulars, bibliographic data, abstracts, keywords, funding particulars, and additional information (Ahmad et al., 2023; Donthu et al., 2021; Gan et al., 2022; Kaurav & Gupta, 2022; Lim, Kumar, et al., 2022; Pandey et al., 2023; Valenzuela-Fernández & Escobar-Farfán, 2022). see figure 1

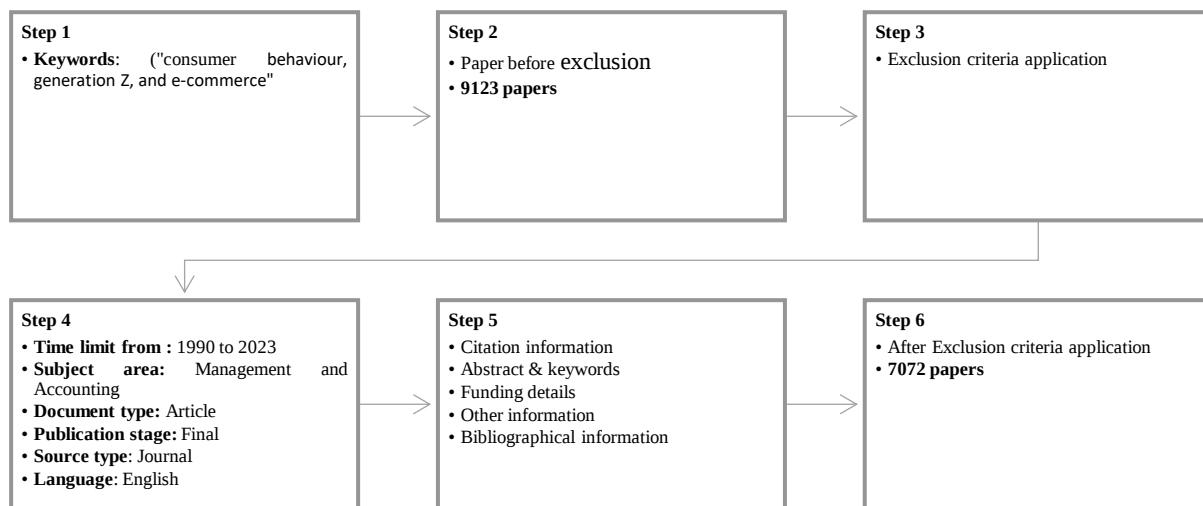


Figure 1: Exclusion criteria process

4) Results

Annual production: In Figure 2 demonstrate the annual production of antecedents and precedents of patron behavior of Generation Z in the area of e-commerce, as it can be observed that first nine papers were published in 1996, while in 1998 there is little publication in this field and it will consider the minimum publication quantity in this area, from 2000 till 2023 the number of publications increases gradually, see table 1

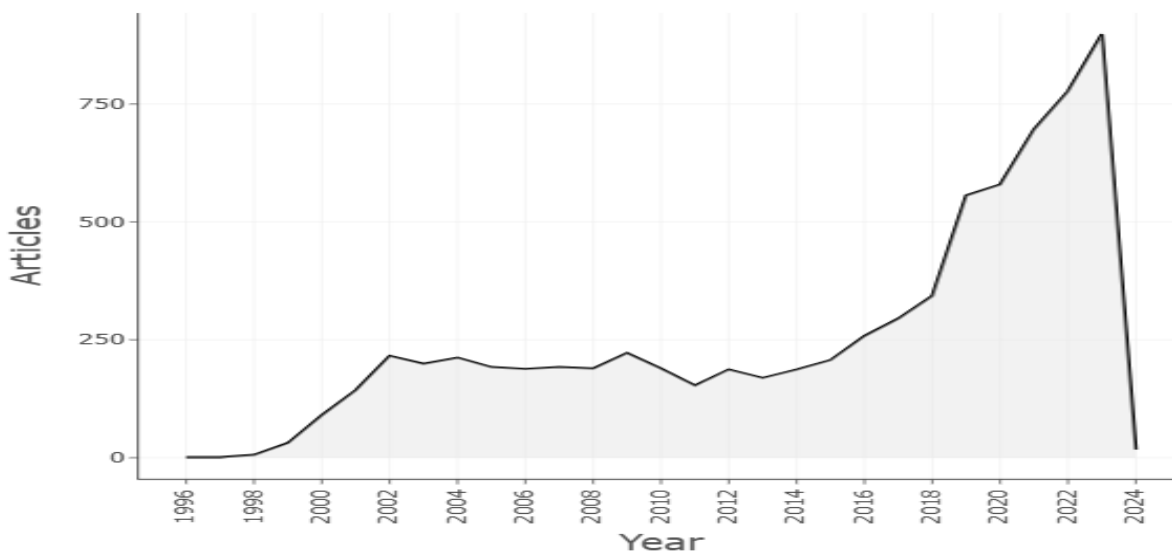


Figure 2: Annual production

Table 1: Annual production

Year	Articles
1996	1
1997	1
1998	6
1999	31
2000	90

2001	143
2002	216
2003	199
2004	212
2005	192
2006	188
2007	192
2008	189
2009	222
2010	189
2011	153
2012	187
2013	169
2014	187
2015	207
2016	258
2017	295
2018	343
2019	556
2020	579
2021	593
2022	756
2023	812

Most Relevant Authors: In Figure 3 it demonstrates the best ten authors of patron behavior of Generation Z in the area of e-commerce, the first authors who have the large citation are WANG Y, WANG X, LI Y, ZHANG Y, LIU Y, WANG J, ZHANG J, I X. and LI J. see table 2

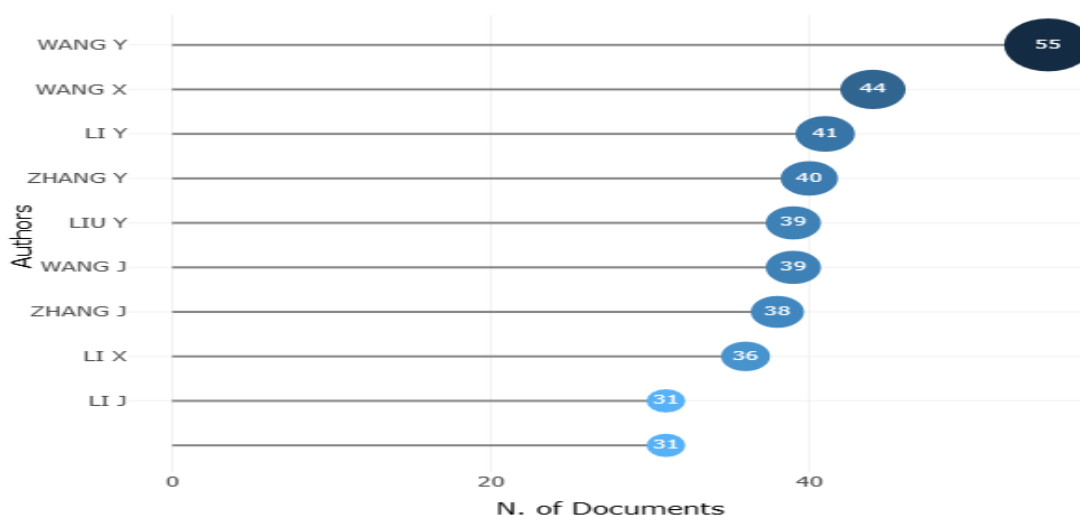


Figure 3: Most Relevant Authors

Table 2: Most Relevant Authors

Year	N	MeanTCperArt	MeanTCperYear	CitableYears
1996	1	400	14.81	27
1997	1	137	5.27	26
1998	6	1.83	0.07	25

1999	31	45.35	1.89	24
2000	90	63.83	2.78	23
2001	143	91.43	4.16	22
2002	216	109.7	5.22	21
2003	199	127.23	6.36	20
2004	212	105.14	5.53	19
2005	192	48.26	2.68	18
2006	188	59.06	3.47	17
2007	192	79.96	5	16
2008	189	60.86	4.06	15
2009	222	50.96	3.64	14
2010	189	44.7	3.44	13
2011	153	46.82	3.9	12
2012	187	25.17	2.29	11
2013	169	41.72	4.17	10
2014	187	33.08	3.68	9
2015	207	43.3	5.41	8
2016	258	39.23	5.6	7
2017	295	29.04	4.84	6
2018	343	31.45	6.29	5
2019	556	21.48	5.37	4
2020	579	17.98	5.99	3
2021	593	23.58	6.12	7
2022	756	36.59	4.39	5
2023	812	42.98	5.27	9

Tree-Map analysis: In this analysis, the focus is on most frequent keywords in three periods 1990 till 2023, In this period the most common keywords are electronic commerce, sale, internet, e-commerce, commerce, marketing, information technology, websites, decision making, and so on. See Figure 4.

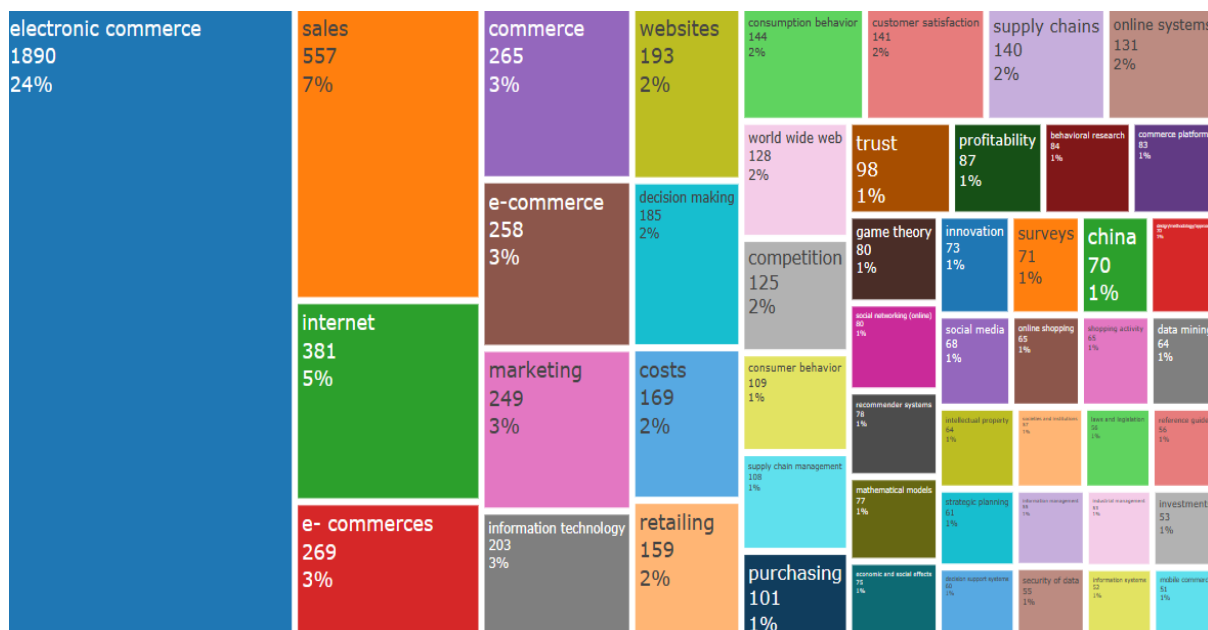


Figure 4: Tree Map

In this section we demonstrate the most cited documents in Generation-Z consumer behavior in E-commerce, as we can observe from Table 3, we illustrate the most cited documents such as SZYMKOWIAK A, 2021, TECHNOL SOC. ANDREA B, 2016, J COMPET. GOH E, 2018, INT J HOSP MANAGE. DJAFAROVA E, 2021, J RETAIL CONSUM SERV. LIU H, 2021, TECHNOL FORECAST SOC CHANGE. HADDOUCHE H, 2018, J TOUR FUTUR. TEJEDOR S, 2020, PUBL. SKINNER H, 2018, J TOUR FUTUR. GOH E, 2020, TOUR MANAGE PERSPECT. GOH E, 2019, INT J HOSP MANAGE. DABIJA D. C, 2019, TRANSFORM BUS ECON. GABRIELOVA K, 2021, BUS HORIZ. MONACO S, 2018, J TOUR FUTUR. ROBINSON VM, 2019, J TOUR FUTUR. PRIPORAS C-V, 2020, J BUS RES. MUNSCH A, 2021, J GLOB SCHOLAR MARK SCI. CHILLAKURI B, 2020, J ORGAN CHANGE MANAGE. GO H, 2023, TOUR REV. ROMERO J, 2021, INT J CONTEMP HOSP MANAGE. MAHMOUD AB, 2021, INT J MANPOW. WEI M-F, 2021, J THEOR APPL ELECTRON COMMER RES. YAMANE T, 2021, J CLEAN PROD. SAKDIYAKORN M, 2021, INT J HOSP MANAGE. and CASALEGNO C, 2022, PSYCHOL MARK

Table 3: Most Cited Documents

Paper	DOI	Total Citations	TC per Year	Normalized TC
SZYMKOWIAK A, 2021, TECHNOL SOC	10.1016/j.techsoc.2021.101565	245	61.25	9.87
ANDREA B, 2016, J COMPET	10.7441/joc.2016.03.06	226	25.11	4.05
GOH E, 2018, INT J HOSP MANAGE	10.1016/j.ijhm.2018.01.016	212	30.29	3.78
DJAFAROVA E, 2021, J RETAIL CONSUM SERV	10.1016/j.jretconser.2020.102345	198	49.5	7.98
LIU H, 2021, TECHNOL FORECAST SOC CHANGE	10.1016/j.techfore.2021.120600	189	47.25	7.61
HADDOUCHE H, 2018, J TOUR FUTUR	10.1108/JTF-12-2017-0059	132	18.86	2.35
TEJEDOR S, 2020, PUBL	10.3390/publications8040048	126	25.2	5.61
SKINNER H, 2018, J TOUR FUTUR	10.1108/JTF-12-2017-0060	119	17	2.12
GOH E, 2020, TOUR MANAGE PERSPECT	10.1016/j.tmp.2019.100603	116	23.2	5.17
GOH E, 2019, INT J HOSP MANAGE	10.1016/j.ijhm.2019.02.005	111	18.5	4.97
DABIJA D-C, 2019, TRANSFORM BUS ECON	NA	110	18.33	4.93
GABRIELOVA K, 2021, BUS HORIZ	10.1016/j.bushor.2021.02.013	104	26	4.19
MONACO S, 2018, J TOUR FUTUR	10.1108/JTF-12-2017-0053	99	14.14	1.76
ROBINSON VM, 2019, J TOUR FUTUR	10.1108/JTF-01-2019-0014	94	15.67	4.21
PRIPORAS C-V, 2020, J BUS RES	10.1016/j.jbusres.2019.05.019	90	18	4.01
MUNSCH A, 2021, J GLOB SCHOLAR MARK SCI	10.1080/21639159.2020.1808812	90	22.5	3.63
CHILLAKURI B, 2020, J ORGAN CHANGE MANAGE	10.1108/JOCM-02-2020-0058	90	18	4.01
GO H, 2023, TOUR REV	10.1108/TR-02-2022-0102	83	41.5	17.05
ROMERO J, 2021, INT J	10.1108/IJCHM-10-2020-1214	82	20.5	3.3

CONTEMP HOSP MANAGE				
MAHMOUD AB, 2021, INT J MANPOW	10.1108/IJM-09-2019-0448	79	19.75	3.18
WEI M-F, 2021, J THEOR APPL ELECTRON COMMER RES	10.3390/jtaer16040037	76	19	3.06
YAMANE T, 2021, J CLEAN PROD	10.1016/j.jclepro.2021.125932	75	18.75	3.02
SAKDIYAKORN M, 2021, INT J HOSP MANAGE	10.1016/j.ijhm.2020.102822	72	18	2.9
CASALEGNO C, 2022, PSYCHOL MARK	10.1002/mar.21637	71	23.67	6.45
JIÅ~Å• B, 2016, J COMPET	10.7441/joc.2016.04.07	71	7.89	1.27
WINDASARI NA, 2022, J INNOV KNOWL	10.1016/j.jik.2022.100170	70	23.33	6.36
CHANG W-L, 2018, ELECT COMMER RES APPL	10.1016/j.elerap.2018.01.014	70	10	1.25
GOH E, 2021, INT J CONTEMP HOSP MANAGE	10.1108/IJCHM-11-2020-1295	69	17.25	2.78
CHILLAKURI B, 2018, HUM RESOUR MANAGE	10.1108/HRMID-01-2018-0006	66	9.43	1.18
INT DIG PICHLER S, 2021, BUS HORIZ	10.1016/j.bushor.2021.02.021	65	16.25	2.62
MALONI M, 2019, INT J MANAGE EDUC	10.1016/j.ijme.2019.100320	64	10.67	2.87
SMITH KT, 2019, J STRATEG MARK	10.1080/0965254X.2017.1384043	64	10.67	2.87
CHEN ZT, 2021, J CONSUM CULT	10.1177/1469540518787574	56	14	2.26
AMEEN N, 2022, PSYCHOL MARK	10.1002/mar.21715	53	17.67	4.82
VITEZIÄ† V, 2021, SERV IND J	10.1080/02642069.2021.1974406	52	13	2.09
MONTIEL I, 2020, J BUS ETHICS	10.1007/s10551-019-04184-x	52	10.4	2.32
RODRIGUEZ M, 2019, J BUS BUS MARK	10.1080/1051712X.2019.1565136	52	8.67	2.33
KIM DY, 2023, J RES INTERACT MARK	10.1108/JRIM-08-2021-0200	50	25	10.27
GOMES S, 2023, J CLEAN PROD	10.1016/j.jclepro.2023.136092	48	24	9.86
GROW JM, 2018, J ADVERT EDUC	10.1177/1098048218768595	47	6.71	0.84
JAYATHILAKE HD, 2021, BENCHMARKING	10.1108/BIJ-06-2020-0311	45	11.25	1.81
LAZÄ• NYI K, 2017, POL J MANAG STUD	10.17512/pjms.2017.16.1.07	45	5.63	2.16
DABIJA D-C, 2020, J RISK	10.3390/jrfm13070152	43	8.6	1.92

FINANC MANAG				
THANGAVEL P, 2022,	10.1177/0972150919880128	42	14	3.82
GLOBAL BUS REV				
ZHANG T, 2020, TOUR	10.1108/TR-06-2019-0251	41	8.2	1.83
REV				
DABIJA D-C, 2017,	NA	41	5.13	1.97
TRANSFORM BUS ECON				
PÃ%REZ-ESCODA A,	10.3390/publications9020024	40	10	1.61
2021, PUBL				
HERNANDEZ-POZAS O,	10.1080/08975930.2019.1663779	40	6.67	1.79
2019, J TEACH INT BUS				
BRAVO R, 2020, INT J	10.1002/jtr.2327	39	7.8	1.74
TOUR RES				
EK STYVÃ%N M, 2018, J	10.1108/JTF-12-2017-0057	39	5.57	0.69
TOUR FUTUR				

There are several topic trends related to Generation-Z consumer behaviour in E-commerce such as innovation, research work, technology adoption, consumption behaviour, perception, and marketing. See figure 5

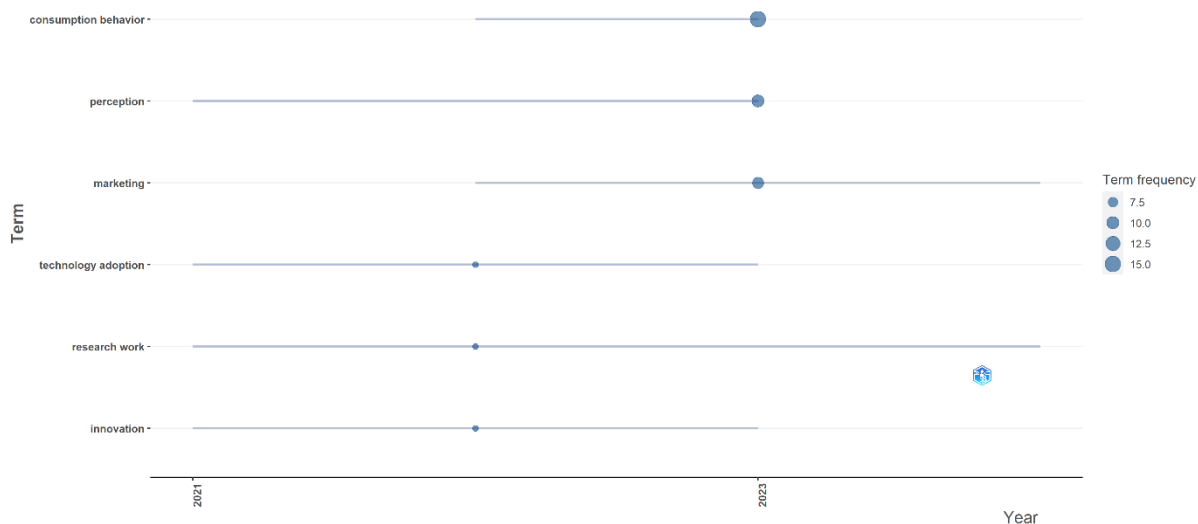


Figure 5 Topic trends

Co-occurrence analysis: The objective of this part is to demonstrate the analysis of the simultaneous occurrence of keywords. Figure 6 displays four fundamental nodes, with each node symbolizing a distinct color. Each node within the network corresponds to a keyword, and the fundamental nodes are as follows: The color purple represents e-commerce, the color yellow represents the internet and fast-time delivery, and the color blue represents simplicity of use. Each node indicates the presence of the keyword. The keyword exhibits the highest frequency in the e-commerce category, followed by the Z generation category with the second highest frequency, the e-commerce category with the third highest frequency, and the internet category with the highest frequency overall.

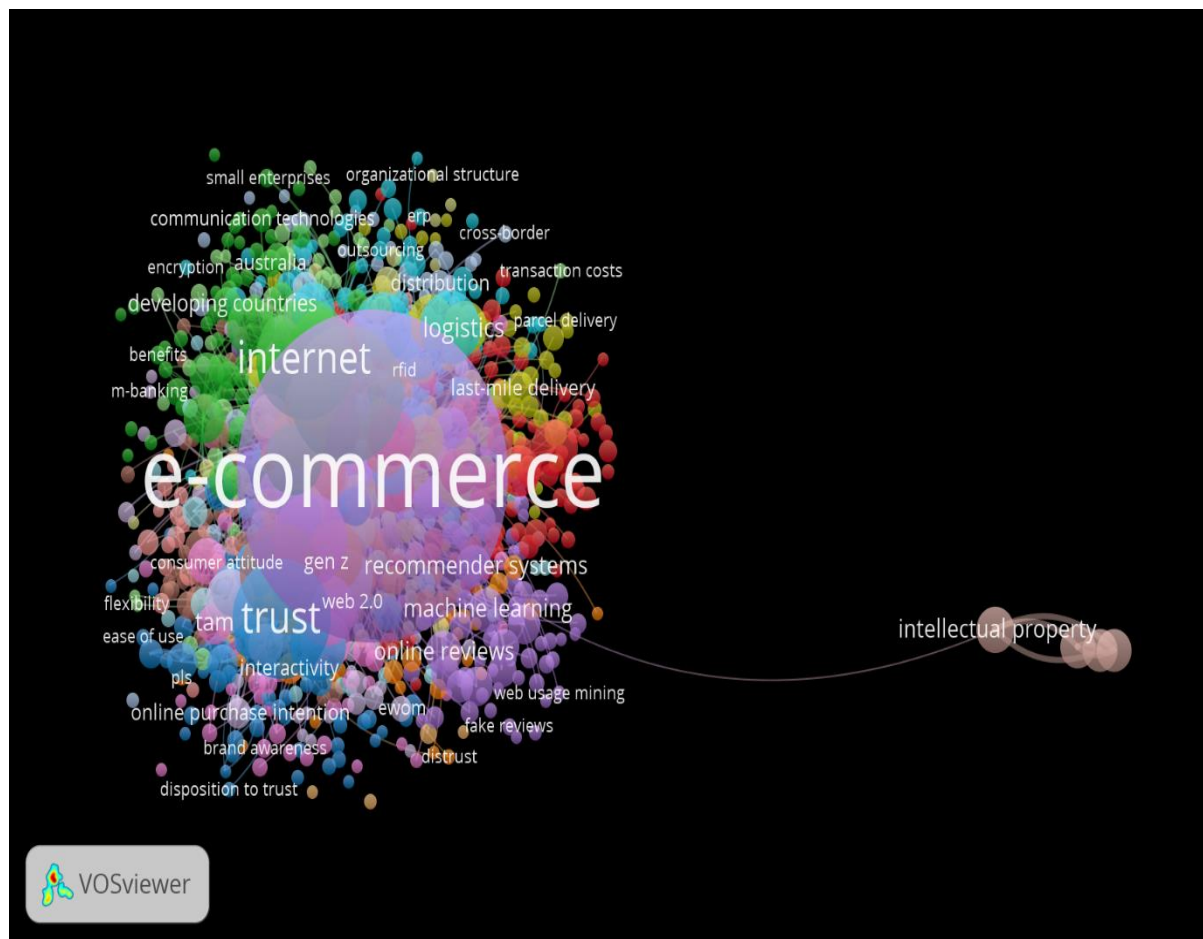


Figure 6: Co-occurrence analysis

Thematic map: A thematic map focuses on the spatial distribution of a certain theme. It is divided into four sections, each representing distinct types of themes. These themes are defined according to four criteria: Niche themes, Motor themes, Basis themes, and Declining themes (see Figure 7).

Niche themes: The three topics of intellectual property, reference assistance, and physical copies fall under the category of niche issues, which are highly developed but not fundamental to the research field.

Motor themes: This quadrant showcases our study area's most advanced and refined themes. The aforementioned topics encompass electronic commerce, the Internet, and e-commerce.

Basic and transverse themes: This quadrant showcases underexplored topics within our field of study. The main focal points encompass sales, e-commerce, and commerce.

Declining themes: In this fourth quadrant, it depicts concepts that are irrelevant nor developed about our research stream. Themes are either declining or emerging and need more examination. Words like information technology, law, and legislation in the declining category.

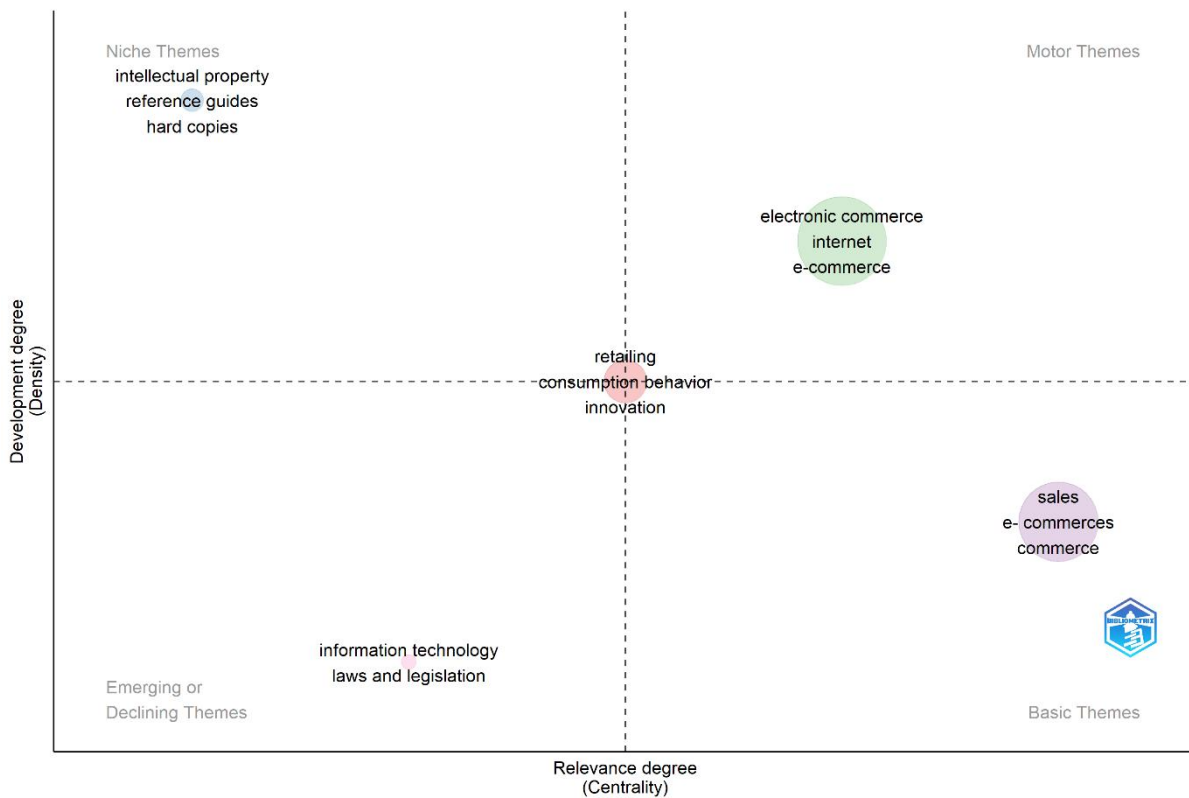


Figure 7: Thematic map

Factorial Analysis: The factorial analysis is a statistical method to explore the interrelationship between the clusters. The purpose of factorial analysis is to investigate the relationship among the group variables based on the Multiple Correspondence Analysis methods; as observed in Figure 8, there are two basis variables: intellectual property and reference guidance; these two variables control other variables groups, as it can be observed that intellectual property and reference guidance have a control on innovation, shopping activity, retailing, purchasing, information technology and so on.

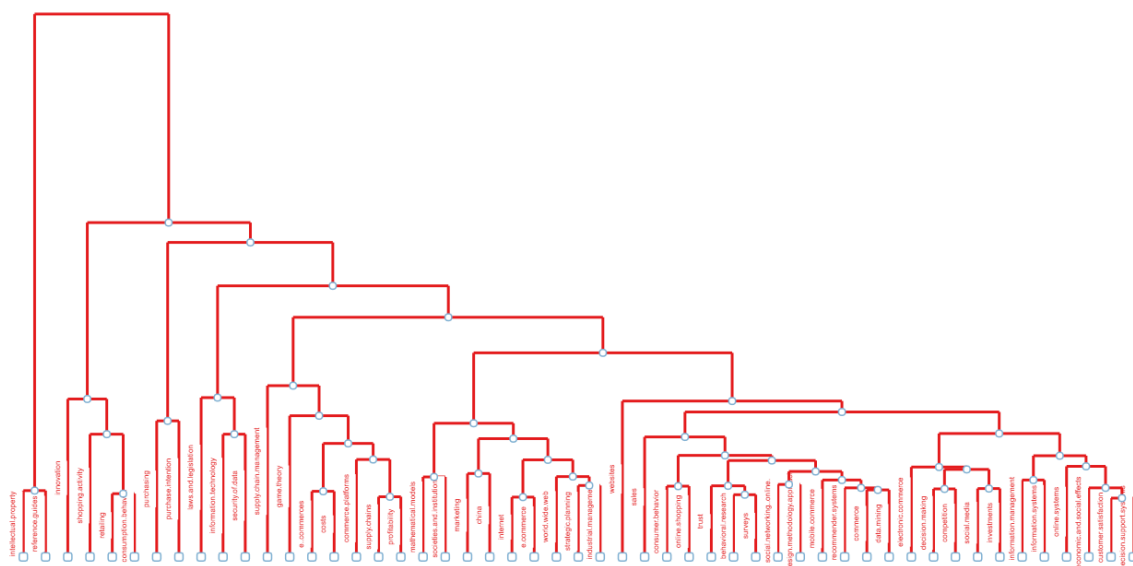


Figure 8: Factorial Analysis

5) Discussion

The annual production of research papers in the antecedents and precedents of Generation Z's patron behavior in e-commerce has shown a steady increase since 1996, with a notable spike in publications from 1999 onwards. This trend indicates a growing interest and recognition of the significance of understanding Generation Z's behavior in the context of e-commerce over the years. Analysis of the most relevant authors reveals consistent contributors to the field, with authors like WANG Y, WANG X, and LI Y consistently appearing among the top cited.

This suggests the presence of established experts whose work continues to influence research in this area. Bradford's Law has been applied to categorize journals into three zones, with a proportional distribution based on frequency. The clustering indicates key journals where research in this domain is concentrated, such as ELECTRONIC COMMERCE RESEARCH AND APPLICATIONS and JOURNAL OF RETAILING AND CONSUMER SERVICES. The most frequent keywords in the analyzed period include electronic commerce, internet, e-commerce, and marketing, reflecting the core focus of research. Additionally, factorial analysis identifies key variables like intellectual property and reference guidance that exert control over other thematic groups, showcasing the interrelationships within the research domain.

Overall, the findings suggest a maturing field of research focused on understanding Generation Z's behavior in e-commerce, with diverse contributions from researchers worldwide and a rich landscape of interconnected themes and collaborations. This indicates a dynamic and evolving research ecosystem aimed at addressing the complexities of patron behavior in the digital marketplace.

6) Conclusion

As the purpose of the study is to explore the improvement in z-generation, e-commerce, and consumer behavior to assist researchers in gaining new awareness and detecting emerging growth areas for further research in this field. The overview of the yearly output of factors that influence the behavior of Generation Z consumers in the field of e-commerce. Our analysis reveals that the initial nine papers were published in 1996. However, there was a decrease in publications in 1998, which can be considered the lowest point in terms of the quantity of publications in this area. From 2000 to 2023, In the same way, the most cited documents in Generation-Z consumer behaviour in E-commerce are: SZYMKOWIAK A, 2021, TECHNOL SOC. ANDREA B, 2016, J COMPET. GOH E, 2018, INT J HOSP MANAGE. DJAFAROVA E, 2021,. J RETAIL CONSUM SERV. LIU H, 2021, TECHNOL FORECAST SOC CHANGE. HADDOUCHE H, 2018, J TOUR FUTUR. TEJEDOR S, 2020, PUBL. SKINNER H, 2018, J TOUR FUTUR. GOH E, 2020, TOUR MANAGE PERSPECT. GOH E, 2019, INT J HOSP MANAGE. DABIJA D. C, 2019, TRANSFORM BUS ECON. GABRIELOVA K, 2021, BUS HORIZ. MONACO S, 2018, J TOUR FUTUR. ROBINSON VM, 2019, J TOUR FUTUR. PRIPORAS C-V, 2020, J BUS RES. MUNSCH A, 2021, J GLOB SCHOLAR MARK SCI. CHILLAKURI B, 2020, J ORGAN CHANGE MANAGE. GO H, 2023, TOUR REV. ROMERO J, 2021, INT J CONTEMP HOSP MANAGE. MAHMOUD AB, 2021, INT J MANPOW. WEI M-F, 2021, J THEOR APPL ELECTRON COMMER RES. YAMANE T, 2021, J CLEAN PROD. SAKDIYAKORN M, 2021, INT J HOSP MANAGE. and CASALEGNO C, 2022, PSYCHOL MARK

The dataset utilized in this study is limited to Scopus, which is a single source. This is because merging BibTeX files from several sources is impossible through the Biblioshiny interface. To address this, future work may employ an alternative database and eliminate duplicates. As so, this study will serve as a blueprint for similar endeavors in the future. Future research should explore the relationship between e-commerce, z-generation, and consumer behavior with green innovation, and examine the relationship between AI with z-generation and e-commerce.

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