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Article Reviews

Pathway of Online Impulsive Buying Tendency Research (2007-2024): Bibliometric Analysis

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Received : September 4, 2024	Revised : September 7, 2024	Accepted : September 9, 2024	Online : October 15, 2024

Abstract

The goals of this study were to assess the body of knowledge about the propensity for online impulsive purchasing, to rectify the shortcomings of past reviews, and to provide academics and industry professionals with an up-to-date, thorough overview of the state of research in the field of online impulse buying tendency. We employed bibliometric analysis approaches to analyze the body of literature on online impulsive purchasing propensity. It was useful for summarizing data through significant contributions, the most prolific writer, the most powerful organization, output within a specific time frame, the rise of keywords, and so on. Article searches were conducted using the Scopus database from 2007 until 2024. The number of studies undertaken in this sector has significantly increased in recent years, as evidenced by bibliometric studies, with China and the United States being the leading contributors. The literature frequently mentioned hedonistic consumption habits, the impact of social media, website design, and promotion. Future studies should look more closely at how emerging technologies like virtual reality and artificial intelligence affect impulsive purchasing behaviour. More comprehensive insights could also be obtained by conducting in-depth studies on cultural variations and the ways in which cultural elements influence impulsive internet purchases.

Keywords Impulsive Buying Tendency, Online, Impulse Buying, Impulse Buying Behaviour

INTRODUCTION

The inclination to make impulsive purchases online was a common occurrence that was impacted by a number of variables linked to consumer behaviour in the digital sphere. The inclination toward hedonic consumption was one important aspect that contributed to online impulsive buying (Wulansari & Wilujeng, 2024). Customers' emotions, impulsive conduct, and lack of cognitive control—often set off by visually enticing items during an online shopping session—were the main causes of this tendency (Lee & Chen, 2021). Online impulse-buying behaviours were also greatly influenced by internal and external trigger cues, as well as impulse-buying inclination, emotional and cognitive states, and normative judgment (Kimiagari & Malafe, 2021).

Additionally, the quality of a website influences the atmosphere and increases the probability that users will feel compelled to make impulsive purchases online (Godara & Bishnoi, 2019). Moreover, factors like hedonic motivation, fear of missing out (FOMO), and shopping promotions could stimulate consumers to engage in impulsive buying behaviours (Kamalia et al., 2023). Personalized social media advertising was identified as a significant factor influencing online impulse buying tendencies, highlighting the importance of tailored marketing strategies (Dodoo & Wu, 2019).

E-commerce's unrestricted nature allows consumers to access vast product information, receive stimuli, and ultimately engage in impulsive buying behaviours (Cui et al., 2022). The rapid growth of online impulse buying necessitated continuous exploration of consumer motivations within the digital landscape (Milaković & Ahmad, 2023). Perceived risk, social influence, and sales promotions were among the factors that impacted online impulse-buying tendencies (Pacheco et



al., 2023). The interaction between shopping lifestyle, fashion involvement, and other situational and dispositional antecedents further shaped impulsive buying patterns in e-commerce (Augustinah et al., 2023).

Academic scholars and industry professionals have given online impulse-buying behaviour a great deal of thought. It had several facets, including the virtual store's layout and aesthetics, the caliber of the website (Ribeiro et al., 2020), intimating contents (Dwivedi & Chaturvedi, 2020), easy navigation, credit card acceptance, flexible payment options, and extremely quick one-click checkout processes, all of which had been demonstrated to favourably influence online buyers' inclination to make impulse purchases (Chetioui & El Bouzidi, 2023).

As a result, not many academics have reviewed the body of literature already in existence and reported on the many frameworks that have been employed over time, their findings, and potential future study areas (Hong et al., 2023). A small number of recent studies that concentrated on the theoretical underpinnings, research methods, study settings, and variables influencing impulse buying sought to characterize the present level of research on online impulse buying behaviour (Ayan et al., 2022; Firdaus et al., 2019). A bibliometric study had previously been conducted by Bashar and Singh (2022) regarding impulsive buying on social media platforms by analyzing articles sourced from Scopus database. However, this study was more specialized in impulsive buying behaviour in social commerce. Hence, the study we conducted was different from what researchers had done before because it reviewed related articles about impulsive buying tendencies not only in social commerce but in all online platforms. This study's goals were to assess the body of knowledge about the propensity for impulsive buying tendencies, rectify past reviews' shortcomings, and provide academics and industry professionals with an up-to-date, thorough overview of the field's research on online impulse buying behaviour.

LITERATURE REVIEW Impulsive Buying Tendency

Impulsive buying tendencies pertain to behaviours in which an individual can make purchases without meticulous deliberation or predetermined plans (Goel et al., 2022). This conduct essentially involves shopping based on sudden inclinations frequently incited by various factors such as emotions, visual stimuli, social influence, or the individual's inherent impulsiveness (Nagar, 2016). Those characterized by impulse buying tendencies may experience an intense urge to acquire a product or service when presented with an enticing offer or when immersed in situations that evoke positive emotions (Lee, 2018).

Additionally, research has shone a light on the influence of visual cues and the physical environment in shaping one's propensity for impulse buying. Social pressure, originating from sources such as friends, family, or peer groups, has also been identified as a factor that can exert sway over impulsive purchases. This body of research delves into the ways in which social influence can impact and potentially steer impulsive buying decisions (Yi et al., 2023).

RESEARCH METHOD

We have applied bibliometric analytic methodologies to the literature from 2007 until 2024. A thorough comprehension of the corpus of knowledge and its numerous facets, such as cocitations and co-occurrence, is made possible by bibliometric analysis (Donthu et al., 2021). In order to get the best papers for this context, a combination of keywords was employed to search the Scopus database for publications on online impulsive buying behaviour. To search inside the Title, Abstract, and Author's Keywords (TITLE-ABS-KEY), use the following keywords: " impulsive buying tendency" OR "online impulsive buying tendency" OR "purchase tendency" OR "online purchase tendency". After doing a preliminary search using the aforementioned keywords, 1239 articles were discovered. The writers then carefully examined each article to select the ones that most closely related to online impulsive buying behaviour.

Using the aforementioned criteria, we were able to reduce the number of literature items in our sample to 202, which includes book chapters, conference papers, articles, and reviews. These constitute our sample for additional analysis. For descriptive data analysis, the Biblioshiny application of the R Package has been utilized (http:// 127.0.0.1:3158/). To analyze networks and visualize data, we have implemented VOSviewer 1.6.20.

FINDINGS AND DISCUSSION Sample Characteristics

The sample comprises 202 papers authored by 679 people and published in 154 journals between 2007 and 2024 (Figure 1). The average number of citations per document is 21.79, and the average number of citations per year is 1.875. Only 21 papers are single-authored, and 25.74% of them include international co-authorship. There are 3.68 writers per document, and 729 keywords were utilized for certain graphics.



Figure 1. Main Information Source: Biblioshiny Output (2024)

Most Cited Countries

The most influential country in terms of contribution is China, which contributed 1207 citations, with an average article citation count of 44,7 citations (Table 1). In second place is the USA, with 739 citations and 26,4 average total citations.

Table 1. Most Cited Coutries					
Country	Total citation	Average article citations	Country	Total citation	Average article citations
China	1207	44.7	Belgium	39	13
Usa	739	26.4	Malaysia	35	7
Netherlands	463	154.3	Spain	33	8.2
United kingdom	383	34.8	New zealand	32	32
Germany	167	15.2	Norway	31	15.5
Turkey	108	54	Sweden	30	30

Country	Total citation	Average article citations	Country	Total citation	Average article citations
India	104	14.9	Indonesia	29	5.8
Australia	92	18.4	Portugal	26	3.7
France	85	21.2	Brazil	24	24
Korea	83	16.6	Czech Republic	23	23
Canada	71	11.8	Israel	23	23
Switzerland	60	30	Mexico	21	21
Denmark	42	42	Greece	14	14
Hungary	41	41	Pakistan	13	13

Most Relevant Author

Most Influential Documents

The authors with the highest publication volume were Shahzad M, Zafar AU, Brand M, Carver CS, Chamberlain SR, Chen CW, Darrat MA, Dwipedi YK, Febrilia I, Gao H, Grant JE (Table 2). Their h-index, which is the maximum value of h for an author who produced h papers and received at least h citations, and their g-index, which is calculated based on the distribution of citations for a particular group of articles that have been ranked in decreasing order of the number of received citations, and their m-index—which is the ratio of h-index and the total number of years since the researchers' first publication—were the most prolific authors.

		Table 2. Mo	ost Relevant A	uthors		
Element	h_index	g_index	m_index	ТС	NP	PY_start
SHAHZAD M	3	3	0.75	302	3	2021
ZAFAR AU	3	3	0.75	302	3	2021
BRAND M	2	2	0.33	66	2	2019
CARVER CS	2	2	0.40	19	2	2020
CHAMBERLAIN SR	2	3	0.40	26	3	2020
CHEN CW	2	2	0.50	38	2	2021
DARRAT MA	2	2	1.00	14	2	2023
DWIVEDI YK	2	3	0.67	203	3	2022
FEBRILIA I	2	2	0.50	21	2	2021
GAO H	2	2	0.67	20	2	2022
GRANT JE	2	3	0.40	26	3	2020
HING N	2	2	0.29	88	2	2018
HUBERT M	2	2	0.18	6	2	2014
LI E	2	2	0.29	88	2	2018
MONTAG C	2	2	0.25	43	2	2017
OLSEN SO	2	2	0.67	38	2	2022
PARAYITAM S	2	2	0.67	77	2	2022
QIU J	2	2	0.50	247	2	2021
RUSSELL AMT	2	2	0.29	88	2	2018
SHEN J	2	2	0.50	111	2	2021

The papers are ranked according to the total number of citations received both locally and annually. The top 20 most referenced local papers are shown in Table 3; the greatest number of

total local citations is 460, which is earned by Verhagen's 2011 paper published in the Journal of Information Management. There are a total of 367 and 216 citations in the papers that came in second and third.

	Table 3. Most Influentia	l Documents	
Author	Title/Journal	DOI	Total Citations
Verhagen and Van Dolen (2011)	The influence of online store beliefs on consumer online impulse buying: A model and empirical application. <i>Information &</i> <i>Management, 48</i> (8), 320-327.	10.1016/j.im.2011.08.001	460
Xiang et al. (2016)	Exploring consumers' impulse buying behavior on social commerce platform: The role of parasocial interaction. <i>International journal of</i> <i>information management</i> , <i>36</i> (3), 333-347.	10.1016/j.ijinfomgt.2015.11.002	367
Chen and Yao (2018)	What drives impulse buying behaviors in a mobile auction? The perspective of the Stimulus-Organism-Response model. Telematics and informatics, 35(5), 1249-1262.	10.1016/j.tele.2018.02.007	216
Zafar et al. (2021)	The impact of social media celebrities' posts and contextual interactions on impulse buying in social commerce. <i>Computers in human</i> <i>behavior, 115,</i> 106178.	10.1016/j.chb.2019.106178	191
Dawson and Kim (2009)	External and internal trigger cues of impulse buying online. Direct Marketing: An International Journal, 3(1), 20-34.	10.1108/17505930910945714	155
Lo et al. (2022)	Why do consumers buy impulsively during live streaming? A deep learning-based dual-stage SEM-ANN analysis. Journal of Business Research, 147, 325-337.	10.1016/j.jbusres.2022.04.013	143
Wu et al. (2016)	Defining key drivers of online impulse purchasing: A perspective of both impulse shoppers and system users. International Journal of Information Management, 36(3), 284-296.	10.1016/j.ijinfomgt.2015.11.015	139
Kim and Eastin (2011)	Hedonic tendencies and the online consumer: An investigation of the online shopping process. Journal of Internet Commerce, 10(1), 68-90.	10.1080/15332861.2011.558458	129
Gunden et al. (2020)	Consumers' intentions to use online food delivery systems in the USA. International journal of contemporary hospitality management, 32(3), 1325-1345.	10.1108/IJCHM-06-2019-0595	128
Sun and Wu (2011)	Trait predictors of online impulsive buying tendency: A hierarchical approach. Journal of Marketing Theory and Practice, 19(3), 337- 346.	10.2753/MTP1069-6679190307	95
Flight et al. (2012)	Feeling the urge: Affect in impulsive and compulsive buying. Journal of Marketing Theory and Practice, 20(4), 453-466.	10.2753/MTP1069-6679200407	89
Brockmeyer et al. (2015)	Approach bias and cue reactivity towards food in people with high versus low levels of food craving. Appetite, 95, 197-202.	10.1016/j.appet.2015.07.013	80
Ozen and	Shopping online without thinking: being	10.1108/APJML-06-2013-0066	76

Author	Title/Journal	DOI	Total Citations
Engizek (2014)	emotional or rational?. Asia pacific journal of marketing and logistics, 26(1), 78-93.		
Chih et al. (2012)	The antecedents of consumer online buying impulsiveness on a travel website: Individual internal factor perspectives. <i>Journal of Travel & Tourism Marketing</i> , 29(5), 430-443.	10.1080/10548408.2012.691393	73
Liao et al. (2017)	Factors influencing online shoppers' repurchase intentions: The roles of satisfaction and regret. <i>Information & Management, 54</i> (5), 651-668.	10.1016/j.im.2016.12.005	65
Jones et al. (2014)	Impulsivity and drinking motives predict problem behaviours relating to alcohol use in university students. Addictive behaviors, 39(1), 289-296.	10.1016/j.addbeh.2013.10.024	62
Goel et al. (2022)	A moderated mediation model for e-impulse buying tendency, customer satisfaction and intention to continue e-shopping. Journal of Business Research, 142, 1-16.	10.1016/j.jbusres.2021.12.041	60
Lejoyeux et al. (2007)	Prevalence of compulsive buying among customers of a Parisian general store. Comprehensive psychiatry, 48(1), 42-46.	10.1016/j.comppsych.2006.05.005	58
Zafar et al. (2021)	Impulse buying in social commerce: bundle offer, top reviews, and emotional intelligence. Asia Pacific Journal of Marketing and Logistics, 33(4), 945-973.	10.1108/APJML-08-2019-0495	56
Zafar et al. (2021)	Relation of impulsive urges and sustainable purchase decisions in the personalized environment of social media. Sustainable Production and Consumption, 25, 591-603.	10.1016/j.spc.2020.11.020	55

Most Used Keywords

The most used keywords were extracted from the author's keyboard using the Biblioshiny app, and the top 20 most used keywords are presented in Table 4. The word cloud is presented in Figure 2 for the most frequent keywords. Impulse buying is the keyword the authors use the most, having 29 occurrences in our sample. The terms impulsivity, impulse buying tendency, impulsive buying, and online shopping are the prominent keywords used by most researchers. The size of the words in the word cloud represents the frequency of those words around online impulse buying behaviour. Consumer online impulse buying behaviour research has given birth to certain new words like online shopping and social media, which signifies the area is growing and attracting researchers from across.

Occurrences
29
19
15
14
8
7

Occurrences
7
6
6
6
5
5
5
5
4



Figure 2. Word Cloud Source: Biblioshiny Output, 2024

Thematic Analysis

Trend Topics

This study's trend topics identify the most frequently discussed issues and topics in the context of online impulse purchases and the factors that influence them (Figure 3). Research shows that many studies focus on factors that trigger impulse purchases, such as body image, online reviews, reviewer reputation, and product presentation. Online promotions are considered to be one of the main factors influencing impulse purchases, where attractive promotions can encourage consumers to make unplanned purchases (Figure 4).

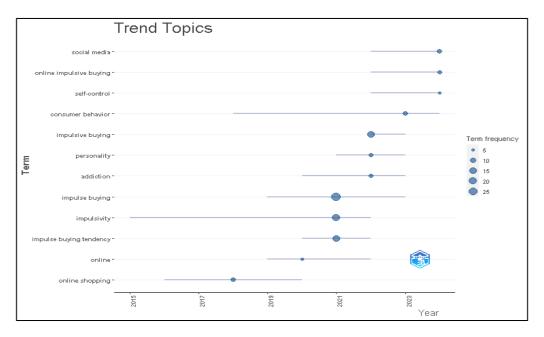


Figure 3. Trend Topics Source: Biblioshiny Output (2024)

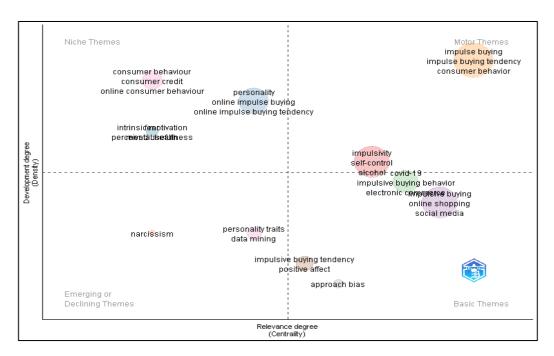


Figure 4. Thematic Map Source: Biblioshiny Output (2024)

Thematic Evolution

Thematic evolution describes how these topics have evolved over time, showing a trend of changing research focus and how the understanding of these topics is deepening (Figure 5). Early research (2007-2018) focused more on individual factors such as impulsivity and hedonistic motives. However, over time, the focus of the research shifted to contextual factors such as the influence of online reviews, promotions, and reviewer's reputations on impulse buying tendencies.

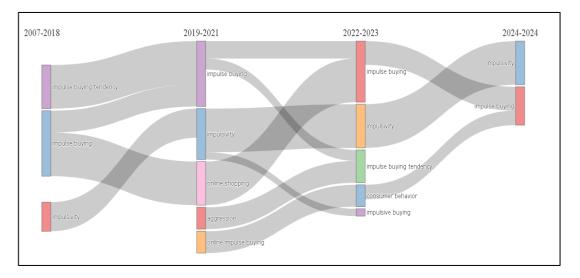


Figure 5. Thematic Evolution

Recent research (2019 – 2024) tends to develop more complex conceptual models to understand the relationship between impulse buying tendency, impulse purchase decisions, and consumer satisfaction. These models often involve mediation and moderation variables to provide a more comprehensive understanding. The thematic evolution also shows an increased emphasis on the overall consumer experience, where satisfaction is measured not only from the products purchased but also from the entire shopping process, including interaction with sellers and ease of transactions.

Network Visualization

Figure 6 illustrates the interconnectedness of various terms related to online impulse buying, forming distinct clusters. The network visualization from VOS Viewer maps these relationships, with nodes representing keywords and edges showing their co-occurrence. Different colours highlight clusters of closely related terms.

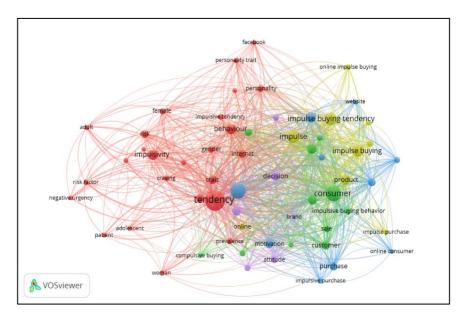


Figure 6. Map Network Visualization

The red cluster focuses on psychological and behavioural aspects of impulsivity and risk, indicating an exploration of inherent traits that may predispose individuals to impulsive behaviours. The green cluster centres on consumer behaviour, particularly impulse buying, and includes terms like "impulse buying," "decision," and "e-commerce," reflecting the impact of online shopping on impulsive purchasing. The blue cluster links digital environments with impulsive tendencies, examining how social media and online contexts influence these behaviours. The yellow cluster delves into specific triggers of impulse buying, such as marketing strategies and consumer attitudes. The purple cluster explores the relationship between impulsiveness, attitude, and knowledge, while the orange cluster focuses on compulsive buying and its prevalence.

Overlay Visualization

The Overlay Visualization in VOS Viewer adds a temporal dimension to keyword analysis in impulsivity and consumer behaviour research. It shows how the relevance of themes has evolved, with colors indicating the recency of research (Figure 7). The green cluster focuses on recent studies about impulse buying and consumer behaviour in e-commerce. The blue cluster connects digital platforms to impulsive tendencies, while the yellow cluster examines triggers like marketing strategies. The purple cluster explores the impact of attitudes and knowledge on impulsive behaviour, and the orange cluster addresses compulsive buying.

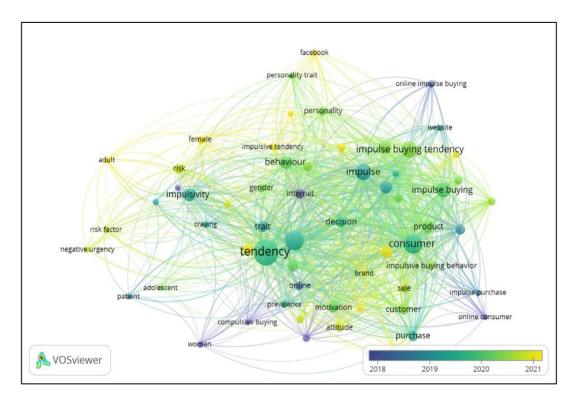


Figure 7. Overlay Visualization

Density Visualization

Density Visualization illustrates the occurrence density of terms or keywords in literature, offering a heatmap-like overview of relationships among keywords related to impulsivity and consumer behaviour (Figure 8). In this visualization, nodes represent terms, with proximity and color intensity reflecting the frequency and strength of their co-occurrence. The bright yellow areas indicate the most central and frequently occurring terms.

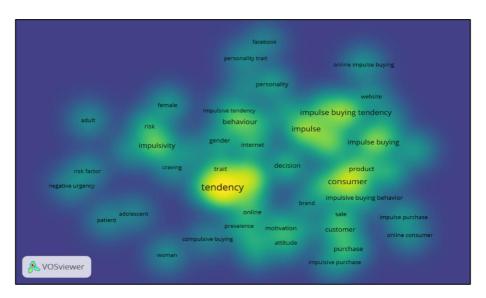


Figure 8. Density Visualization

The term "tendency" is a significant node, central to the research, frequently co-occurring with other terms. Surrounding it are important clusters, such as "impulsivity," "risk," "behaviour," and "trait," which connect psychological traits to impulsive behaviour. Another key cluster revolves around consumer behaviour and impulse buying, with terms like "consumer," "decision," and "e-commerce" highlighting research on what drives unplanned purchases, especially online. A further cluster focuses on digital platforms, including "social media" and "online" environments, showing interest in how these influence impulsive behaviours.

A cluster around "compulsive buying," "prevalence," and "attitude" suggests research into the extent and factors behind compulsive buying. These visualizations—network, overlay, and density—provide a comprehensive view of online impulse buying research, helping identify trends, gaps, and future research directions.

Discussion

The study of impulsive buying, particularly in online shopping, has gained significant attention in consumer behaviour research due to the digital transformation of commerce. This bibliometric analysis, spanning academic work from 2007 to 2024, provides an in-depth overview of the trends, key contributors, and significant research outputs in this field. The shift from physical stores to online platforms has amplified opportunities for impulsive purchases, driven by factors such as easy product access, targeted ads, and online promotions. This analysis highlights the growing academic interest in understanding the unique drivers of online impulsive buying, with a notable surge in research output over the past two decades. Particularly in the last five years, there has been a significant increase in publications, with more than 50% of the total literature produced in the last two years.

The study also examines the geographical distribution of research, identifying the United States and China as leaders in publications and citations due to their large e-commerce markets. However, contributions from countries like Germany, the UK, and India demonstrate the global relevance of this research. A key finding is the shift from focusing solely on individual psychological factors to more complex models that include contextual influences, such as online promotions, product reviews, and the shopping environment. This reflects a broader trend in consumer

behaviour research, recognizing the interaction between internal and external factors in shaping impulsive buying behaviour. The study highlights the growing emphasis on the consumer experience, particularly the broader context of impulsive buying, including pre-purchase and post-purchase stages. These insights suggest that managing impulsive buying requires considering the design and operation of digital environments.

CONCLUSIONS

The bibliometric studies reveal a sharp rise in recent research, with the United States and China leading the field. Key factors identified include hedonistic consumption, social media influence, website design, and promotions. External factors like the online shopping experience and transaction ease significantly drive impulse buying. Most studies use a quantitative survey approach, highlighting a need for more diverse methods, including qualitative research, to understand consumer motivations. The study underscores that both internal and external factors shape impulse buying, which is crucial for marketers and website designers in e-commerce.

LIMITATION & FURTHER RESEARCH

This bibliometric review suggests several key areas for future research on impulsive buying: exploring the interaction between internal and external factors, examining the impact of new technologies like AI and virtual reality, and investigating cultural differences in online purchasing. For deeper insights, more diverse methods, such as qualitative and longitudinal studies, are recommended. Developing complex conceptual models with mediation and moderation variables could better explain the relationship between impulsivity, purchase decisions, and consumer satisfaction.

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