

Are We Smart? The New Meaning of a Smart Consumer

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Abstract

This study explores the evolution of the "smart consumer" concept, contrasting past definitions with contemporary perspectives shaped by technological advancements and societal shifts. Traditionally, smart consumers were seen as thrifty individuals who made informed choices within limited information networks, relying on word of mouth, advertisements, and salespeople. Over time, the definition has expanded with the advent of the internet and digital tools, allowing modern smart consumers to conduct extensive online research, compare prices, and consider ethical and environmental factors in their decisions. Young consumers, in particular, embody this shift, utilizing social media, peer reviews, and mobile technology to make socially conscious and personalized purchasing choices. A bibliometric analysis was conducted using data from Web of Science to investigate academic literature on "smart consumers" and "young consumers," highlighting dominant themes, influential authors, and research trends. Findings indicate a significant conceptual shift from viewing smart consumers primarily as rational and price-conscious decision-makers toward understanding them as digitally connected, socially aware, and value-driven actors. The bibliometric analysis highlights the growing prominence of themes related to social media influence, sustainability, mobile technologies, online information processing, and ethical consumption, particularly in studies focused on younger generations. The results also reveal an increasingly interdisciplinary research landscape, with strong connections between consumer behavior, technology studies, and sustainability research. The study identifies a limited integration of business and marketing perspectives within the existing literature, suggesting the need for future research focused on managerial implications, digital consumer profiling, and emerging forms of smart consumption among younger consumers.

Keywords

Smart Consumers, VOSViewer, Bibliometric analysis, Young Consumers.

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Introduction

The definition of a smart consumer was someone which knew their spending limits, knew their rights and responsibilities as well as being informed before they buy anything. In the past, a smart consumer was associated with the terms "thrifty consumer" or "frugal consumer" which represented the individuals which were careful with their finances and made sure that they would get the most value for their money in rapport with their spendings (Evans, 2011).

If we were to compare the past meaning of the smart consumer term with the actual one, it is easily distinguishable due to the lack of online factors in the old meaning. The absence of internet access made customers rely on word of mouth, advertisements, and traditional media to inform themselves. Compared to modern methods, this process proves more time consuming and requires more effort in terms of comparing prices, looking for discounts, and buying items and products between multiple physical stores.

Moving from one physical store to another physical store implies limited market awareness in comparison with the current times in which most things could be found online (Zhou, 2014).

In the absence of extensive online research, the reliance on salespeople was very strong, since they were the only source of information that people could rely on. Many individuals made their purchase decisions based on advice given by store employees, and salesmen which was not always in their best interest (Roy et al., 2022). Furthermore, they relied on the reputation of brands, recommendations from trusted individuals, and their own prior experiences with certain products or services.

Since environmental awareness is a relatively new concept, there was not much if any consideration regarding the impact of the purchases made by an individual. Therefore, the term "smart consumer" would not have been used to describe someone who made ethical buying (Michler et al., 2020).

The smart consumer term can be attributed to individuals who make informed and well-prepared purchasing decisions by taking time to research products, compare product prices and taking into consideration the environmental and social impact of their purchase before completing it (Priporas, 2020).

Since smart consumers are attentive in regards to their wants and needs being met, they try to avoid impulse buying (meaning buying something without thoughtful consideration or planning) and choose products that are reliable and last for a relatively long period of time (Isharyani et al., 2020).

Despite the increasing academic interest in consumer digitalization and socially responsible consumption, the evolving meaning of the "smart consumer" concept remains fragmented across disciplines and insufficiently explored in relation to younger generations. Existing studies tend to address isolated dimensions of smart consumption, such as technology use, price comparison, or ethical behavior, without offering an integrated perspective on how the concept has evolved over time. In this context, the present study aims to explore the conceptual evolution of the smart consumer and to identify the main research directions associated with smart and young consumers in the academic literature. More specifically, the study addresses the following research question: How has the concept of the smart consumer evolved in contemporary research, and what thematic trends characterize the relationship between smart consumption and younger generations? To answer this question, a bibliometric analysis based on Web of Science data was conducted, focusing on dominant themes, influential authors, and emerging research patterns.

1. Literature Review

The meaning of a smart consumer changed in time. In the 1950s to 1970s, the smart consumer was considered to be the informed consumer - someone who was aware of product quality and prices, often making decisions based on knowledge gained from limited sources like newspapers, TV, or word-of-mouth (Chakrabarti et al., 2022). They had to be very budget-conscious, focused on quality and value, and trusted mostly traditional brands. During the 1980s, smart consumers were primarily value-driven, focused on balancing cost and quality (Priporas, 2020). The rise of discount stores and warehouse clubs like Costco in the US highlighted this mindset. They were thrifty, super cost-conscious, and they did comparison shopping via traditional advertising and in-store visits (Dorokhova et al., 2024). As global brands rose to prominence in the 1990s, the definition of a smart consumer changed and they were the people which could navigate between luxury and practicality, becoming brand-savvy. They became aware of brand prestige and image, willing to pay for quality and status giving the fact that they entered the era of globalization, the effects of the World Wars were vanishing and the exposure to TV ads and early internet marketing, and the rise of multinational corporations, interfered with their behaviour (Sağkaya Güngör et al., 2024). The early 2000's brought the rise of the internet, shaping smart consumers to rely on online information to make decisions. They are tech-savvies, using search engines and websites to compare prices, read reviews, and find product details (Noto La Diega, 2022). What drove this behaviour is the rise of e-commerce, online forums and consumer review websites.

These consumers are socially conscious, use smartphones and apps to shop, compare, and engage with brands, and are often influenced by peer reviews and social media influencers. Nowadays, consumers are highly connected and use multiple devices and channels to make informed decisions (Onete et al., 2016; Vătămănescu et al., 2017). They are increasingly concerned with sustainability, social responsibility, and ethical business practices, as digitalization reshapes consumption patterns and enhances access to information and alternatives (Tanasă et al., 2022). This behavior is driven by the expansion of artificial intelligence, big data, sustainability trends, social activism, climate awareness, and growing concerns regarding privacy in the digital economy.

In our vision, a smart consumer is a person who makes an informed purchase decision, based particularly on data obtained from the online environment. He is an expert in their search, he knows how to choose the most relevant ones, the information found online helps him make the best decision. He is a digital savant, spends a lot of time online, has active Social Media accounts, follows influencers, owns and uses multiple smartly connected devices that help him in his purchasing decision.

2. Research methodology

This study has a bibliometric approach which analyzes academic literature on the terms "smart consumers" and "young consumers". The primary objectives of this analysis are to:

1. Identify and compare common themes and keyword occurrences associated with each term.
2. Explore unique and shared areas of focus within research on smart consumers and young consumers.
3. To identify the most cited authors for the term "smart consumer".
4. Provide an in-depth bibliometric analysis of studies specifically focused on "smart consumers," highlighting influential research and key trends in the field.

The analysis was conducted using two primary keywords: "smart consumers" and "young consumers", they were selected to capture the specific focus areas associated with each type of consumer in academic literature. The data was sourced from Web of Science, and it was chosen because of its extensive coverage of peer-reviewed articles across disciplines relevant to consumer studies. The initial search was refined to include only peer-reviewed journal articles, conference proceedings, and reviews in English, covering a period of 1989 – 2024.

Studies were selected if they had "smart consumers" or "young consumers" as a central theme, focusing on digital behaviors, consumer awareness, or demographic characteristics, and the results were chosen by the first 1000 for each word, choosing them by having a descending order based on the highest number of citations. These two databases were used to create the bubbles diagrams, and they were created using VOSviewer which is a tool helping make easy comparisons of keyword frequency and thematic overlap between the two consumer types. For the visualization and analysis of co-occurrence maps and keywords, VOSviewer version 1.6.18 was used as well, and it is a software developed by Ness Jan van Eck and Ludo Waltman (VOSviewer - Visualizing Scientific Landscapes, n.d.).

The next step consisted of categorizing and quantifying key study characteristics, including study type, sample size, number of authors, research attributes, data collection methods, and access methods. For the construction of the bibliometric approach, 41 studies were selected from an initial dataset of 1000 publications retrieved from the Web of Science database. The initial sample was limited to the first 1000 results based on relevance and database indexing constraints. Subsequently, the studies were screened independently by two marketing specialists according to predefined inclusion criteria, such as thematic relevance to smart consumers and young consumers, conceptual consistency with the research objectives, and the presence of empirical or theoretical contributions directly related to consumer behavior. Studies with limited relevance, duplicated thematic focus, or insufficient conceptual alignment were excluded. The final selection of 41 studies was established through consensus between the two reviewers.

3. Bibliometric analysis for the smart consumer term

To better understand the origins of the term "smart consumer", how it evolved in time and what it encompasses, a bibliometric analysis was conducted. This analysis aims to observing when did this term emerge, and if there is a gap in science which could potentially be filled. The research started with a search on the online database Web of Science. The database was accessed in May 2023, so the following publications were available at that time. The search was for the term "smart consumer" and the selection was made to be found in all fields (Figure 1). There were 15,795 results in total. These results were from many different domains. As it can be seen in the figure below, the domain which has the highest number of publications written on smart consumer is Engineering Electrical Electronic followed By Energy Fuels and Telecommunications. Business and other significant fields (like economics or management) for this study occupy a lower position in the ranking. The term appearing most in Engineering Electrical Electronic happens simply because nowadays the terms is used for regulating energy consumption and sustainability rather than a person which gets the best deal for the lowest price.

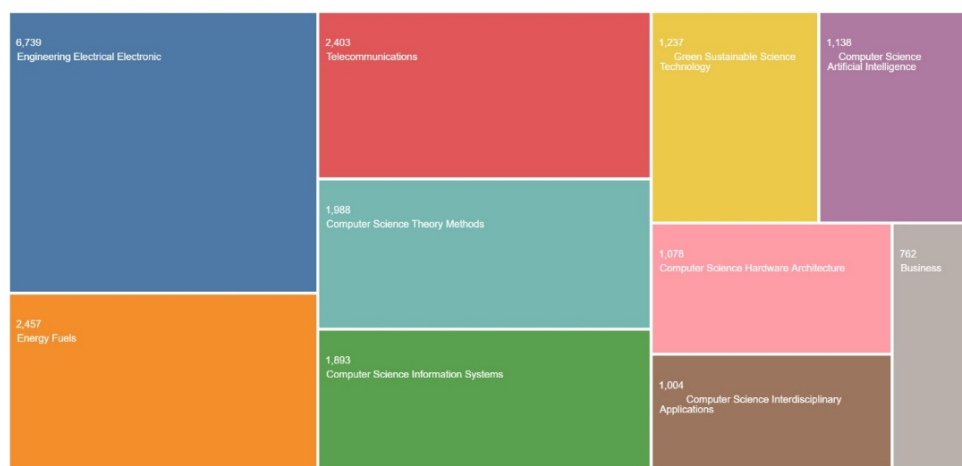


Figure 1. Number of publications in different fields for smart consumer

Source: own computing using VOSViewer soft

To have a relevant analysis, publications in the fields of business, economics, management, business finance, behavioural sciences, international relations, and public administration were chosen, and the sample size ended up consisting in 4427 results. These results have the term smart consumer in all fields therefore no restriction was imposed. The number of publications and citations over time can be seen in the figure below. The first publication on smart consumer from the selected fields was in 1989. The trend is upward, 2022 being the year with the highest number of publications and citations.

From Web of Science the following information was extracted, the most affiliated institutions which published on this topic were RLUK Research Libraries UK, Bucharest University of Economic Studies and Udice French Research Universities. The most published document type was the article with 1,014 results followed by 321 proceeding paper and 52 early access. The authors who published most articles are Pantano Eleonora, Nguyen Bang, Rauschnabel Philipp and Sovacool Benjamin.

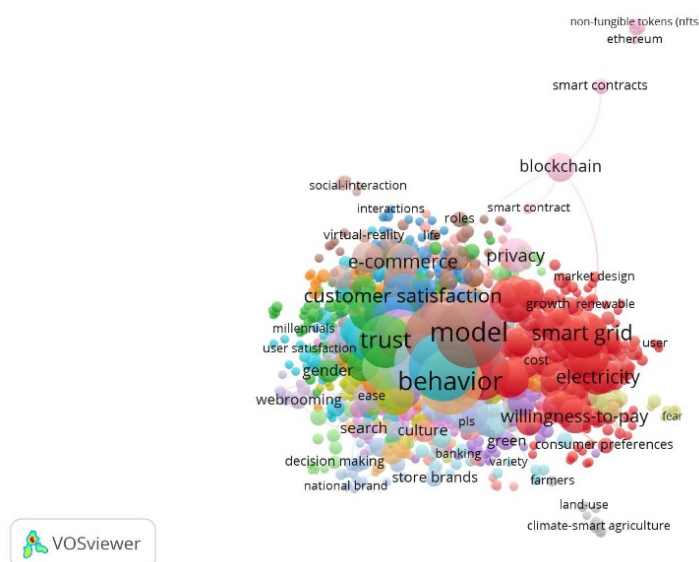


Figure 2. Keywords used in publications – figure with outliers for “smart consumer” term.

Source: own computing using VOSViewer soft

The complete analysis consists in the first 1000 publications downloaded from Web of Science, under the filters which were of interest for this article, and they were exported in an RIS file. A 3D visualization was made of the most cited authors and most used keywords. The database was uploaded in VOSviewer and the specific computations were made in order to get the results. Firstly, the type of analysis and method was chosen by clicking on “Create map based on bibliographic data”, then “Read data from reference manager files”. The RIS tab was chosen and the RIS file downloaded previously was uploaded. The next step

was to choose the right type of analysis. For getting the keywords used in the publications, “Co-occurrence” was chosen as type of analysis and “Keywords” for the unit of analysis. The counting method was chosen afterwards and that is “Full counting”. From 1000 publications there were found 4358 keywords. As the minimum number of occurrences, the set number was 1. As seen in the figure below (Figure 2), the cluster of the smart consumer has a multitude of keywords but also some outlier cluster, which are not connected with the rest.

The main keywords used frequently are model, behavior, trust, and smart grid. The size of the bubbles matter, meaning that the larger the bubble, the greater the frequency of the keyword. The words reflect what was published during this period. The outliers are independent documents which have keywords that can't be related to other publications. From these outliers worth mentioning are blockchain, smart contracts, climate-smart agriculture.

From Figure 2, there are around four clusters which are formed based on colour:

- Red colour cluster: reflects the technological side of a smart consumer, consisting in words like smart grid, electricity, growth renewable.
- Green colour cluster: reflects the brand trustworthiness, consisting in words like trust, customer satisfaction
- Brown colour cluster: reflects the virtual identity of a smart consumer, consisting in word like model, virtual-reality, social interaction
- Light blue colour cluster: reflects the relationship of a smart consumer with brands, consisting in words like national brands, store brands, consumer preferences.

When searching for the term “young consumer” Web of Science returned 16,160 results at the time of searching. They were arranged from the highest number of citation article to the lowest and downloaded the first 1000. This database was uploaded in VOSviewer and the results can be observed in figure 4. There were 5533 keywords found in the respective database. The first three words with the highest occurrence are consumption on first place, followed by attitudes on second and behaviour on third.

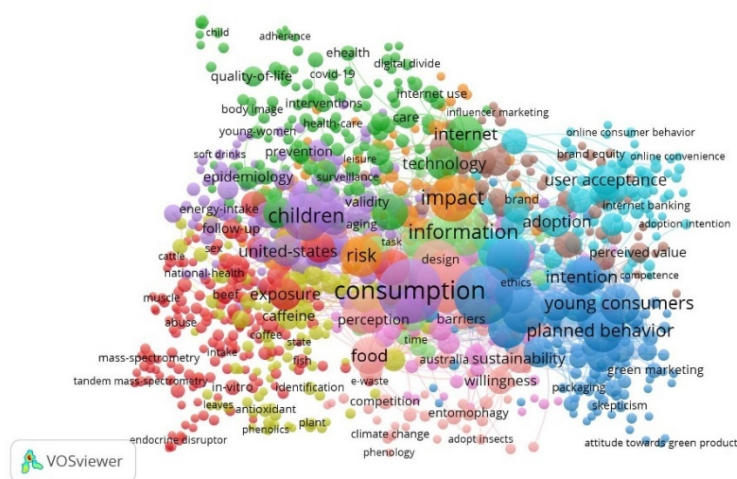


Figure 3. Keywords used in publications – figure with outliers for “young consumer” term.

Source: own computing using VOSViewer soft

From Figure 3, there are around five clusters which are formed based on different coloured clusters indicating thematic groupings related to specific keywords:

- **Light - Blue cluster** has a theme **Young Consumers and Technology Adoption**. This group seems focused on young consumers' adoption of technology, online behaviours, and attitudes towards digital convenience and branding, possibly including sustainability elements like green marketing. Some of the included keywords are: young consumers, user acceptance, adoption, intention, internet banking.
- **Green cluster** has as a theme **Health, Prevention and Internet Use**. This cluster likely covers studies on the impact of technology and internet use on health and wellness, potentially with a focus on prevention.

quality of life, and access to digital health resources. Some of the present keywords are: quality of life, health, digital divide, technology, internet.

- Orange – Yellow cluster has a theme related to Risk, Consumption and Information. This cluster seems to be related to consumption patterns, information processing, and risks associated with consumer behavior, possibly involving sustainability issues. Some of the mentioned keywords are: consumption, risk, information and impact.

- Red cluster is about Health and Nutritional Exposure. This cluster appears to be about health risks linked to food consumption, diet, and the analysis of substances. Some of the keywords are: exposure, caffeine, beef, cattle and muscle.

- Purple cluster is about Public Health and Epidemiology.

This area might represent studies focused on public health, especially in specific demographics or regions, likely exploring epidemiological factors and health prevention measures. Some keywords are: children, epidemiology, and prevention.

Since the figures for the term “smart consumer”, as well as for “young consumer”, explore behavioural and technological themes, they differ in their specific focal points and application domains. Figure 2 has a more specific focus on digital infrastructure, customer trust, and emerging technologies, reflecting an interest in commerce, energy systems, and technology-driven societal changes. Figure 3 has a broad social and health-oriented context, examining consumption behaviours and digital information's impact on youth. In contrast, these visualizations reveal overlapping interests in technology's role in shaping behaviour but with distinct areas of emphasis: the societal impacts of consumption in the first and the trust-based dynamics in technologically advanced systems in the second.

Since one of the objectives is to find out highest number of citations per authors, using the same tool, VOSviewer a 3D visualization with co-cited authors was done. Almost the same steps as for finding out the main keywords were taken, the only difference being the setting of the type of analysis and method. For this step “Co-authorship” was used as a type of analysis, choosing “Authors” for the unit of analysis. The minimum number of citations a document must have, was set to 1.

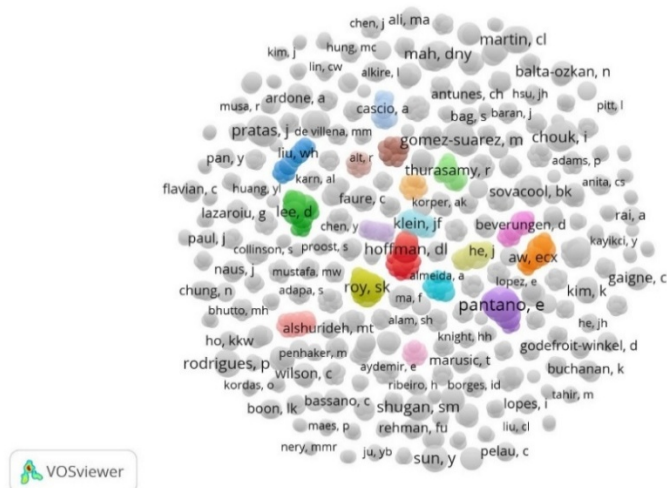


Figure 4. Author co-citation for smart consumer.

Source: own computing using VOSViewer soft

Not a lot of authors have co-cited each other, so the Figure 4 turned out to be independent clusters stuck together. However, the bigger bubble means that that the corresponding author has the highest number of citations. This means that Pantano, Hoffman, and Roy are the first 3 most cited authors.

There has been a noticeable shift towards collaboration over time, with single-author studies becoming less common and multi-author studies becoming dominant. From 1986 to 1997, single-author studies comprised about 33.33%, while by 2019-2024, this dropped to 11.11%. In contrast, studies with three or more authors have increased significantly, representing 66.66% by 2019-2024, indicating a trend towards collaborative and possibly interdisciplinary research in the field of "smart consumers".

The vast majority of studies are journal articles, especially in recent years. Journal articles made up 83.33% of publications in the earliest period (1986-1997) and reached 100% by 2019-2024. Conference papers and books are infrequent, suggesting that journal articles are the preferred medium for disseminating research on this topic. This could reflect the rigor and peer-reviewed standards required for advancing knowledge in a specialized field like "smart consumer".

Quantitative research dominates, with an average of 63.41% across all periods. However, there is an increasing presence of qualitative and mixed methods studies in later years, particularly between 1998-2004, where 62.5% of studies were qualitative. This shift could indicate a broadening of research approaches to include a more in-depth exploration of consumer behaviour, motivations, and preferences rather than solely quantitative analysis.

Initially, studies focused more on "students" as the analysis unit. However, over time, there is a clear shift towards examining "other" consumer groups, which comprises 73.17% of the total dataset. This evolution suggests a broadening of the focus beyond specific demographic groups like students to include a more generalized or varied population, likely reflective of the increasingly widespread relevance of smart consumer behavior across different segments.

The majority of studies across all time periods used sample sizes of a thousand or below, which represents 63.41% of the total studies. There is a slight increase in studies with larger sample sizes in recent periods (20% in 2013-2018 and 11.11% in 2019-2024), suggesting an increasing emphasis on data robustness and possibly more sophisticated methodologies in recent research.

The use of mixed methods (combining experiments and questionnaires) has consistently been the most popular approach, reflecting 43.9% of the total dataset. Literature reviews are also significant, particularly in the earlier period of 1998-2004 (62.5%). Surveys and interviews are less common, with only occasional use, indicating a preference for combining different data sources or experimental approaches to gain comprehensive insights into smart consumer behaviours.

All studies are open access across all time periods, indicating a commitment to accessible research. This could be due to the broad interest in "smart consumer" topics across various disciplines and the need for open, accessible data to foster collaboration and knowledge dissemination.

The bibliometric analysis highlights a growing trend towards collaborative, quantitative research published primarily in open-access journals. Over time, the scope of studies has broadened, shifting from a focus on specific demographics like students to a more generalized consumer base. There is also a notable diversification in research methods, with an increased emphasis on mixed methods and larger sample sizes in recent years. These trends reflect an evolving understanding of the "smart consumer" concept as it becomes increasingly relevant in a digital, data-driven economy. The predominance of journal articles and open-access publications underscores the importance of making research findings widely available, which may be critical for advancing both academic and practical insights into smart consumer behavior. Overall, the analysis suggests a maturing research field that values interdisciplinary collaboration, methodological rigor, and accessible dissemination of findings.

Concluding remarks and implications

The findings of this study highlight the significant conceptual evolution of the "smart consumer" in the context of digitalization. While earlier perspectives associated smart consumers primarily with rationality, thriftiness, and informed purchasing decisions within limited information environments, contemporary research increasingly defines them as digitally connected, socially aware, and value-oriented individuals. The bibliometric analysis revealed the growing importance of themes related to social media, sustainability, mobile technologies, and ethical consumption.

Based on the analyzed literature, the smart consumer can be understood as an individual who actively uses digital environments to support informed purchasing decisions. Contemporary smart consumers rely not only on price comparison and product evaluation, but also on online reviews, influencers, and social media interactions when shaping their consumption choices.

From a theoretical perspective, the study contributes to the literature by clarifying the conceptual transformation of the smart consumer and by integrating perspectives from consumer behavior, digitalization, and sustainability research. The findings also emphasize the increasing relevance of interdisciplinary approaches in understanding contemporary consumer behavior.

From a practical perspective, the results suggest that businesses should adapt their strategies to digitally connected consumers. Companies should focus not only on price competitiveness, but also on transparency, ethical positioning, online engagement, and personalized digital communication.

Despite the growing academic interest in the topic, the analysis revealed a relatively limited presence of business-oriented and qualitative studies within the literature. This indicates important opportunities for future research aimed at exploring the managerial and behavioral dimensions of smart consumption through qualitative and mixed-method approaches.

This study also presents several limitations. Although both “smart consumers” and “young consumers” were initially included in the research design, only the “smart consumers” dataset was analyzed bibliometrically in depth, due to the availability of a more substantial body of literature. In addition, the study relied exclusively on the Web of Science database and on English-language publications, which may limit the inclusion of relevant international contributions. Future research could expand the analysis by incorporating additional databases, multilingual sources, and comparative and empirical investigations into smart consumption among younger generations.

Generative Artificial Intelligence (GenAI) usage statement:

No GenAI tool was used in the development of this paper.

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