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The Role of Social Media in Searching for Information About Products and Making Purchasing Decisions by Customers 4.0

ABSTRACT

The aim of this paper is to find how social media affect making purchasing decisions by contemporary consumers, referred to as Customers 4.0. To start, we assumed that the development of digital technologies, the growing popularity of social media platforms, and changes in consumer information behavior are leading to a redefinition of the classic purchasing process model. The theoretical part discusses the mechanisms of social media, their role in consumer decision-making, and the characteristics of Customer 4.0 as an active, critical, and conscious participant in the digital market. The paper also discusses the potential benefits and threats of using social media as a source of product information. The empirical study was conducted using an online questionnaire (CAWI). The analysis covered 193 respondents classified as Customers 4.0. Structural

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equation modeling (SEM) was used for data analysis. The results of the study show that experience in using social media and the perceived usefulness of the information available on them have a significant impact on the level of consumer knowledge about products. Furthermore, this knowledge positively affects the tendency to share information and the intention to purchase.

KEYWORDS: purchasing process; social media; Customer 4.0; products; making decisions

INTRODUCTION

In the context of a dynamically changing and competitive market, understanding the mechanisms that drive consumer behavior plays a crucial role in effective management and the development of marketing strategies by enterprises. The contemporary market environment, characterized by rapid change, advancing digitalization, and growing complexity in relations between market players, forces companies to conduct in-depth analyses of consumer purchasing decisions. Globalization, the intensification of information technology development, socio-cultural transformations, and even climate change are influencing the evolution of consumer preferences and behaviors, making their understanding a prerequisite for effective competition (Kijek et al., 2019; Roszkowska, 2001; Zhang & Chang, 2021).

In the face of growing market uncertainty and volatility, organizations are increasingly turning to digital tools that enable faster and more accurate identification of customer needs. The COVID-19 pandemic has been a robust catalyst for change, accelerating the adoption of digital solutions in the areas of commerce, communication, and customer service. In this context, the purchasing decision-making process, previously presented as an orderly sequence of logical steps, has undergone a fundamental transformation. The modern purchasing path has become multi-channel, dynamic, and susceptible to external influences such as

other users' opinions or real-time content generated by brands (Mason et al., 2021; Miklošík, 2015; Riaz et al., 2020; Szakal, 2024).

In this context, the growing importance of social media (SM) as a source of information, a space for interaction, and a sales channel deserves special attention. These platforms play an important role at every stage of the purchasing process, enabling users not only to acquire knowledge about products, but also to share experiences and opinions that shape the decisions of other consumers. As a result, we are seeing a clear shift in purchasing decisions towards more collective, social, and trust-based processes (Chowdhury et al., 2024; Hanaysha, 2022; Yogesh & Yesha, 2014).

Along with these changes, a new type of consumer has emerged – Customer 4.0 – characterized by high digital competence, information awareness, and a critical approach to marketing messages. From the perspective of businesses and market practitioners, this means redefining the ways in which they communicate, design their offerings, and manage customer relationships. Knowledge about their behavior and decision-making mechanisms is becoming not only an element of cognition, but also a practical tool supporting the building of competitive advantage (Dash et al., 2021; Giza & Wilk, 2021; Javaid et al., 2022).

The aim of the study is to find how social media affect the purchasing behavior of Customer 4.0. The research objective determined the structure of the paper, which includes the following sections: introduction, a literature review on the importance of social media in Customer 4.0's behavior on the market, data and methods, results and discussion, limitations and future research directions, methodological and practical implications, and a summary.

THE IMPORTANCE OF SOCIAL MEDIA IN CUSTOMER 4.0'S
BEHAVIOR ON THE MARKET

Purchasing decisions are one of the key elements of consumer behavior that are studied and analyzed when developing a strategy for operating in a competitive market. In the traditional approach, the purchasing process is presented as a linear model consisting of the following stages (Brzozowska & Rollnik-Sadowska, 2024; Grant et al., 2001; Roszkowska, 2001):

- Recognition of a need: the consumer notices a need that they want to satisfy.
- Information search: the consumer gathers information about possible solutions.
- Evaluation of alternatives: analysis and comparison of different options.
- Purchase: the final decision to purchase a product or service.
- Post-purchase evaluation: the consumer evaluates whether the product has met their expectations (which influences future purchasing decisions and brand loyalty).

With the development of digital technologies, this process is becoming much more dynamic and complex. In the digital age, the purchasing decision-making process is based on several characteristic features:

- Non-linearity: customers can repeatedly return to earlier stages of information search, compare offers across different channels, and their purchase path is constantly modified depending on the situation (Berlian, 2022; Praditsuwan & Karnreungsiri, 2018).
- Personalization: consumers expect content tailored to their needs and preferences, which can now be enabled by digital technologies using data analytics and artificial intelligence algorithms to deliver the best personalized recommendations (Ayobami Raji et al., 2024; Miklošik, 2015; Suherlan & Okombo, 2023).

- Co-creation: buyers are no longer just recipients of offers. Modern customers actively participate in shaping a brand's image by sharing their experiences and opinions across various digital media (Butler & Peppard, 1998; Suganda & Arrifianti, 2023).

In view of these changes, social media are becoming one of the key tools for influencing the market (Yogesh & Yesha, 2014). They affect not only the way people communicate with each other, but also their consumer decisions. Social media are most often defined as digital platforms that allow users to create, share, and consume content and interact with other users and brands. Their characteristic features are interactivity and the ability to personalize the content delivered to the recipient (Hasan & Sohail, 2020; Sağtaş, 2022).

In the era of digital transformation, the role of social media goes far beyond that of a communication platform. It is becoming an important source of information about products and services and a tool for building relationships between brands and customers. Consumers are increasingly using social media to obtain information about products, analyze other users' opinions, and even make purchases directly on platforms such as Instagram, Facebook, and TikTok (Goodrich & de Mooij, 2013; Riaz et al., 2020).

In the new market reality, social media have also become an integral part of the modern buyer's purchasing process. Its ever-growing importance in the selection and purchase process stems from the following characteristics, which are closely related to its specific nature:

- Easy and unlimited access to information: consumers can obtain detailed information about a product, its advantages and disadvantages, as well as the opinions of other users within seconds (Aslihan et al., 2012; Hanaysha, 2022; Varghese & Agrawal, 2012).

- Dynamic flow of information: social media enable instant dissemination of content, which influences public opinion about products and brands (Ao et al., 2023; Pop et al., 2012). New forms of information exchange and recommendations: influencer opinions, video reviews, and sponsored posts often have a greater impact on purchasing decisions than traditional forms of advertising (Liao et al., 2021; Sriram et al., 2021).
- Strong and direct interaction with brands: social media allow consumers to interact directly with brands, which increases their engagement and loyalty (Mason et al., 2021; Palalic et al., 2021).

The traditional purchasing process model has evolved under the influence of changes in digital technology and its widespread applications on the market. As mentioned earlier, social media have become a key link connecting consumers with brands at every stage of the purchasing process. In the context of digital transformation, social media play the following roles at each stage of the modern customer's purchasing decision-making process:

- Recognizing and shaping consumer needs: content published by influencers, advertisements, and friends' posts can trigger a desire to own a product or use a service. The visual appeal of content on platforms such as Instagram and Pinterest often inspires consumers to take an interest in new trends and products (Belanche et al., 2021; Pan et al., 2025).
- Searching for information: for customers in the digital age, social media is the first and often the only source of information. Among other things, consumers check reviews, watch product unboxing videos, and use search functions in apps. Social media platforms such as YouTube and TikTok have become popular sources of video reviews that help consumers better understand the functionality and quality of products (Muda & Hamzah, 2021; Poh et al., 2024; Tresa Sebastian et al., 2021).
- Evaluation of alternatives: consumers compare different products using rankings, comments, and user reviews available on

social media. Sponsored content and advertisements are often confronted with the opinions of independent users, which increases the importance of authentic reviews (Ding et al., 2024; Suri et al., 2023).

- Purchase: social media increasingly enable direct product purchases through e-commerce features such as Facebook and Instagram shops. Customers can make a purchase without leaving the platform, which shortens the purchase path and increases convenience (Ilieva, 2023; Kuncoro & Kusumawati, 2021).
- Post-purchase evaluation: after making a purchase, consumers share their opinions on social media by posting reviews, product photos, or videos. This type of content influences the decisions of other users. Social media platforms also serve as a tool for reporting complaints or communicating with the brand in case of problems (Ma et al., 2022; Obukhovich et al., 2024).

A new type of customer has emerged in the new reality – Customer 4.0, It is a new generation of consumers who function efficiently in the digital age, characterized by the ubiquity of technology, rapid information exchange, and a high level of personalization. The literature on the subject lists several key characteristics of Customer 4.0 (Bufon et al., 2024; Nowacki, 2014; Skrzypek, 2021; Wolniak & Grebski, 2023):

- Digital nativity: the customer is accustomed to using mobile devices, applications, and online platforms.
- Brand and product awareness: the buyer looks for products and services that meet their individual needs and values.
- Critical approach: the buyer knows how to analyze and compare information, being aware of potential manipulation in social media.
- Interactivity: customers engage in communication with brands by actively participating in content co-creation processes (e.g., reviews, comments, shares).

- Individualization: buyers are also more demanding in terms of personalization, expecting brands to understand their needs and preferences.

As an active internet user, Customer 4.0 uses social media, for example, to (Giza & Wilk 2021; Matiukaite et al., 2024):

- discover new products and services – through targeted advertising and recommendations from friends;
- obtain opinions and reviews before making a purchase decision;
- make transactions using tools embedded in social media platforms (e.g., the Instagram shop feature);
- share their experiences through reviews, comments, and shares, which can influence the decisions of other customers.

Social media is an integral part of the modern market and has a huge impact on the decision-making process of the Customer 4.0. On the one hand, it offers numerous benefits, but on the other hand, it can pose certain risks that affect buyer behavior in the market during the purchasing process.

The main benefits of using social media for Customer 4.0 primarily concern the following aspects (Chowdhury et al., 2024; Hamdani et al., 2022; Khan et al., 2022; Sabila & Albari, 2023; Shrestha et al., 2023; Rahmawati & Nur, 2021):

- Easy access to information: social media offer consumers a wide range of information about products and services, from detailed reviews and guides to visual presentations. Consumers can quickly compare different options by browsing comments, opinions, and posts from friends and influencers.
- Personalization of content: recommendation algorithms tailor content to individual user preferences, making it easier to find products that suit their needs. Thanks to retargeting, ads remind users of previously viewed products, increasing the likelihood of a purchase.
- Interaction with brands and the community: consumers can communicate directly with brands through comments,

messages, or participation in interactive campaigns (e.g., contests). Communities around brands (e.g., Facebook groups, Instagram hashtags) enable the exchange of experiences and recommendations.

- Ability to make purchases directly on social media: e-commerce features on social media, such as Instagram Shop, Facebook Marketplace, and shopping links on TikTok, allow users to quickly move from browsing content to making a purchase.
- Authenticity of user-generated content: opinions and reviews from other users are often perceived as more credible than traditional advertising, which helps consumers make decisions.
- Inspiration and discovery of new trends: social media allow consumers to follow trends and draw inspiration from content posted by influencers, friends, or brands.

On the other hand, the main risks for customers associated with the use of social media are related to the following issues:

- Information overload: the excess of available content can lead to so-called “decision paralysis,” where consumers have difficulty choosing one option from many. Buyers may feel overwhelmed by the number of opinions, reviews, or advertisements (Cabeza-Ramírez et al., 2022).
- The problem of information reliability: not all content published on social media is reliable. Fake reviews, unmarked sponsored content, and manipulated opinions can mislead consumers. Customers are increasingly questioning the authenticity of influencer recommendations, especially when they are not clearly marked as commercial collaborations (Dash et al., 2021; Świerczak, 2017).
- Manipulation and hidden advertising: social media is a space where advertising often takes subtle forms (e.g., product placement, collaborations with influencers), which can make it difficult for consumers to distinguish between sponsored and organic content (Mucundorfeanu et al., 2024; Sanak-Kosmowska & Wiktor, 2020; Wellman et al., 2020).

- Information bubble: although recommendation algorithms tailor content to user preferences, they can lead to consumers being locked into information bubbles, limiting their access to diverse opinions and alternatives (Marzec, 2022; Grewal et al., 2020).
- Lack of control over personal data: the use of social media involves sharing personal data, which is used by platforms to target advertising. Consumers may fear loss of privacy and misuse of their data (Liyanaarachchi et al., 2024; Łagutko & Modric, 2024; Zagajewski & Binek, 2023).
- Excessive reliance on the opinions of others may lead consumers to lose confidence in their own decision-making abilities, particularly when they depend exclusively on the views of other users or influencers (Mensah et al., 2021; Szakal, 2024).
- Increased risk of impulse purchases: features such as “buy now” or time-limited promotions (e.g., flash sales) can lead to impulsive purchasing decisions that later cause dissatisfaction (Reddy & Azeem, 2022; Yang et al., 2024).

DATA AND METHODS

The research sample comprised university students, who according to widely accepted theoretical frameworks are considered to exhibit characteristics typical of Customer 4.0 and to actively participate in fourth-generation e-commerce (Werenda & Woźniak, 2019). The study was conducted between late 2022 and early 2023 using the CAWI (Computer-Assisted Web Interview) method. Data were collected via an online questionnaire created in Google Forms, with responses automatically archived in a Google Sheets file. The data were subsequently formatted for compatibility with statistical analysis software and subjected to quantitative analysis.

A non-probability convenience sampling strategy was employed. Participants were recruited by distributing the survey link

via social media platforms, online forums, and private channels such as email and messaging applications. Additionally, a snow-ball sampling method was applied, whereby respondents were encouraged to forward the survey link to their acquaintances.

The initial sample consisted of 440 respondents. In the first stage of analysis, K-means clustering was used to segment the sample and identify individuals fitting the profile of Customer 4.0. The clustering process considered variables such as respondents' preferences regarding sources of information, communication channels, value orientations, and payment methods used during the purchasing process. As a result, two distinct consumer segments were identified. The first segment, comprising 193 individuals, was classified as representative of Customer 4.0 and included in subsequent analyses. The remaining 247 respondents formed a separate consumer group.

For the purposes of this study, both endogenous and exogenous constructs were developed. These included: usefulness of information from SM, experience in SM use, knowledge on products, sharing information on products, intention to buy products. In total, 24 items were employed to operationalize the constructs (see Table 1).

Table 1. Constructs and items used in the research model.

Latent variables	Items
Usefulness of information from SM	<p>Social media provide access to a wide range of product-related information</p> <p>Social media deliver comprehensible product information</p> <p>I can easily obtain product information through social media</p> <p>Social media offer quick access to product-related information</p> <p>Social media help me accelerate my product purchase decisions</p> <p>Social media are a source of up-to-date product information</p>

Latent variables	Items
Experience in SM use	<p>I am proficient in using social media tools</p> <p>I am aware of the capabilities of social media for information searching</p> <p>I frequently use social media to search for needed information</p> <p>I always begin my shopping process by checking information on social media</p> <p>I always know what kind of information I am looking for on social media</p> <p>I easily find the information I need on social media</p> <p>Social media have increased my knowledge</p>
Knowledge on products	<p>I can easily compare available offers on the market</p> <p>I use reviews and comments posted on social media when deciding on a product to choose or purchase</p> <p>I try to verify information using other sources</p> <p>Social media help me discover more products that I was previously unaware of</p> <p>After browsing or using social media, my knowledge about the product increases</p>
Sharing information on products	<p>I share both positive and negative comments about products on social media</p> <p>I encourage my friends to share their experiences with products on social media</p> <p>I ask or post questions on social media when searching for information about products I plan to purchase</p>
Intention to buy products	<p>After obtaining information about a product on social media, I intend to check out the product</p> <p>After obtaining information about a product on social media, I look for a store where I can purchase it</p> <p>After obtaining information about a product on social media, I want to buy the product</p> <p>Using information about products on social media increases my chances of gaining greater benefits</p>

All variables were assessed using a five-point Likert scale, with response options ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The validity of the measurement model was evaluated based on reliability and construct validity criteria. Reliability was estimated using Raykov's Reliability Coefficient (RRC), which offers a more accurate assessment than Cronbach's alpha by relaxing the assumption of tau-equivalence. Convergent validity was established through the calculation of the Average Variance Extracted (AVE). To analyze the interrelationships among the constructs, Structural Equation Modeling (SEM) was applied.

RESULTS AND DISCUSSION

A confirmatory factor analysis (CFA) was performed to evaluate the psychometric properties of the measurement model. As presented in Table 2, the standardized factor loadings of the observed variables exhibit variation. In this context, composite reliability (CR) was applied as a measure of internal consistency; it is a generalized form of Cronbach's alpha and becomes equivalent to it under conditions of tau-equivalence. The CR values for all constructs exceeded the threshold of 0.60, which is regarded as acceptable in empirical research. With respect to convergent validity, the average variance extracted (AVE) values ranged from 0.41 to 0.46. Although these values fall below the conventional cutoff of 0.50, they may still be deemed acceptable in light of Fornell and Larcker's (1981) criterion, which posits that convergent validity remains adequate if CR exceeds 0.60, even when AVE is below 0.50. Furthermore, the majority of standardized factor loadings exceeded the recommended minimum value of 0.50, confirming the satisfactory quality of the indicators

Table 2. Reliability and validity of variables.

Variable	No. of items	Factor loadings range	AVE	CR
Usefulness of information from SM	6	0.55–0.73	0.41	0.82
Experience in SM use	7	0.54–0.74	0.45	0.81
Knowledge on products	4	0.55–0.80	0.43	0.80
Sharing information on products	3	0.77–0.87	0.46	0.86
Intention to buy products	4	0.65–0.72	0.44	0.77

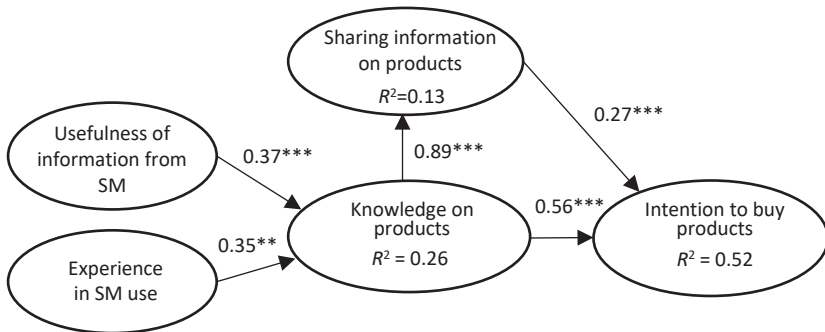
Figure 1 presents the results of the structural model estimation. Most of the paths are significant at the 0.01 p -value. The model's chi-square is statistically significant, suggesting that the hypothesis of perfect fit should be rejected. All other model fit indices, namely the root mean square error of approximation $RMSEA = 0.081$ and the comparative fit index $CFI = 0.77$, generally meet the recommended thresholds, indicating that the model has good fit.

Furthermore, Figure 1 also provides information on the predictive power (R^2) for each dependent variable. R^2 indicates the percentage of the total variance in the dependent variable explained by the independent variables. This means that our model accounts for 52% of the total variance in the intention to purchase products, 18% of the total variance in sharing information about products, and 26% of the total variance in knowledge about products. All of these values represent an acceptable explanatory value.

As illustrated in Figure 2, both prior experience with social media and the perceived usefulness of information obtained through these platforms exert a positive influence on consumers' product knowledge. This relationship may be explained by the observation that greater familiarity with social media enhances users' ability to efficiently search for, interpret, and assess product-related content. Individuals with more extensive experience

in navigating social media environments are better equipped to filter information and recognize content relevant to their needs. Moreover, when users perceive the information encountered on social media as useful, they are more inclined to engage with it, thereby increasing the depth and accuracy of their product-related knowledge. This interplay suggests that experienced users are more proficient in leveraging social media content to support their purchasing decisions.

Figure 1. Results of structural model estimation.



*** $p < 0.01$, ** $p < 0.05$.

The findings indicate that product knowledge exerts a positive influence on the propensity to share information about products. This relationship can be attributed to the fact that individuals with a higher level of product-related knowledge exhibit greater confidence in their ability to assess and effectively communicate product value to others. As consumers become more informed, they are increasingly inclined to participate in discussions, share personal experiences, and offer recommendations within their social networks. Such behavior is driven both by the intention to support others in making well-informed purchasing decisions and by the intrinsic satisfaction derived from sharing useful insights.

Moreover, the results demonstrate that product knowledge affects purchase intentions through both direct and indirect mechanisms. The direct effect, as reflected by a path coefficient of 0.89, suggests that an increase in product knowledge is associated with a corresponding increase in the intention to purchase. This underscores the central role of product knowledge in shaping consumer decision-making.

In addition, an indirect effect estimated at 0.24 (0.89×0.27) was observed, indicating that product knowledge also influences purchasing intentions via the intermediary variable of information sharing on social media. This suggests that informed consumers not only make more confident purchase decisions themselves but also engage in communicative behaviors that reinforce such intentions within their social circles.

In summary, the findings highlight the pivotal role of product knowledge as a determinant of purchase intentions, operating through both direct and mediated pathways. This underscores the complex and multifaceted influence of consumer knowledge within the decision-making process.

Limitations and future research direction

The conducted research provided valuable insights; however, several limitations should be acknowledged, as they may influence the interpretation of the findings and provide a basis for further inquiry.

First, the sample was selected using a non-random, convenience-based approach, which constrains the generalizability of the results to the broader population of Customer 4.0. Although the study deliberately targeted students – representatives of a young, digitally engaged demographic – the demographic structure of the sample does not fully reflect the diversity of contemporary consumers, thus limiting the representativeness of the findings.

Second, the study employed a cross-sectional design, meaning that data were collected at a single point in time. This approach

precludes the analysis of temporal changes in consumer behavior and, consequently, limits the ability to infer trends or directions in purchasing attitudes, particularly in the context of rapidly evolving digital technologies.

In light of these limitations, several potential avenues for future research can be proposed to enhance and expand the current understanding:

- conduct longitudinal studies to capture the dynamics of consumer behavior and identify long-term trends in social media usage;
- broaden the research sample to include diverse age, cultural, and occupational groups, thereby enabling comparative analyses across consumer segments;
- apply mixed-method approaches that combine quantitative and qualitative techniques to gain deeper insights into user motivations, attitudes, and decision-making processes;
- examine the influence of specific social media platforms (e.g., Instagram, TikTok, YouTube) or content types (e.g., influencer endorsements, user-generated reviews) on consumer purchasing behavior;
- investigate the relationship between social media engagement and variables such as brand loyalty, trust, and willingness to recommend products or services.

Future, more comprehensive studies may significantly deepen the understanding of the decision-making mechanisms characteristic of Customer 4.0 and support the development of more effective marketing strategies adapted to the realities of the digital marketplace.

Methodological and practical implications

Our research and analysis provide several methodological insights that may serve as a foundation for future studies on consumer behavior in the context of social media.

Firstly, the application of structural equation modeling (SEM) enabled a comprehensive evaluation of the relationships among latent variables and confirmed the validity of the proposed theoretical framework. This analytical approach proved highly effective in examining the complex interrelations among user experience, perceived information usefulness, product knowledge, and purchase intention.

Secondly, the construction of the measurement instrument allows for its replication and adaptation in comparative studies across various cultural, sectoral, or demographic contexts. The findings also emphasize the necessity of incorporating both cognitive variables (e.g., product knowledge) and behavioral variables (e.g., information sharing) into research models, thus providing a basis for their future extension and refinement.

From a managerial perspective, the study offers practical implications for digital marketing, customer relationship management, and brand communication strategies. The results confirm that social media constitute a key medium for shaping consumer knowledge about products, which subsequently influences purchasing decisions and the willingness to recommend these products to others.

For enterprises, this underscores the importance of strategically managing brand presence on social media platforms, particularly through:

- the creation of valuable, accessible, and engaging content;
- transparent and authentic collaboration with influencers;
- building customer relationships founded on trust, interaction, and personalized communication;
- systematic monitoring of user feedback and its integration into the processes of product and service improvement.

Moreover, organizations are encouraged to develop advanced analytical tools to gain deeper insights into consumers' digital purchasing behavior and to implement educational initiatives

aimed at enhancing users' ability to critically assess content disseminated via social media.

CONCLUSION

The contemporary consumer market is undergoing profound transformation driven by the advancement of digital technologies and the increasing significance of social media as both an information source and a channel of marketing communication. Theoretical analyses and empirical findings presented in this study confirm the pivotal role of social media in shaping the purchasing behavior of Customers 4.0, who are modern, informed, and digitally active consumers.

The identified relationships demonstrate that both experience in using social media and the perceived usefulness of information obtained through these platforms significantly influence consumers' knowledge regarding products. Furthermore, this knowledge is positively correlated with both the intention to purchase and the willingness to share information with other users. The results of structural equation modeling indicate satisfactory model fit and substantial explanatory power with respect to the dependent variables, particularly purchase intention.

The study provides evidence that social media platforms not only facilitate the consumer information process, but also contribute to the formation of attitudes, preferences, and purchasing decisions. Accordingly, social media should be regarded as strategic instruments in marketing communication and customer relationship management. However, attention must also be paid to the risks associated with this form of interaction, especially those related to the credibility of information, manipulation through sponsored content, and concerns over user privacy.

In conclusion, social media constitute an integral component of the digital consumer ecosystem and exert a considerable influence

on the behavior of Customer 4.0. This reality calls for a deliberate, transparent, and ethically responsible corporate presence in social media, grounded in trust, authenticity, and the delivery of tangible value to users.

REFERENCES

- Ao, L., Bansal, R., Pruthi, N., & Khaskheli, M. B. (2023). Impact of social media influencers on customer engagement and purchase intention: A meta-analysis. *Sustainability*, 15(3), 1–15. <https://doi.org/10.3390/su15032744>
- Ayobami Raji, M., Bukola Olodo, H., Tolulope Oke, T., & Afua Addy, W. (2024). E-commerce and consumer behavior: A review of AI-powered personalization and market trends. *GSC Advanced Research and Reviews*, 18(3), 66–77. <https://doi.org/10.30574/gscarr.2024.18.3.0090>
- Belanche, D., Casaló, L. V., Flavián, M., & Ibanes-Sánchez, S. (2021). Understanding influencer marketing: The role of congruence between influencers, products and consumers. *Journal of Business Research*, 132, 186–195. <https://doi.org/10.1016/j.jbusres.2021.03.067>
- Berlian, M. (2022). Analysis of segmenting, targeting and positioning strategies on consumer purchase decisions in the digital era. *International Journal of Economics, Business and Accounting Research*, 6(4), Article 7061. <https://doi.org/10.29040/ijebars.v6i4.7061>
- Brzozowska, K., & Rollnik-Sadowska, E. (2024). Czynniki determinujące decyzje zakupowe konsumentów z pokolenia Z [Determinants of purchase decisions of Generation Z consumers]. *Academy of Management*, 8(3), 188–212. <https://doi.org/10.24427/az-2024-0044>
- Buffon, C. Z., Elshennawy, A., & Cudney, E. A. (2024). The evolution into customer 4.0: A systematic literature review. *Journal of Management and Engineering Integration*, 17(2), 1–9. <https://doi.org/10.62704/10057/28460>
- Butler, P., & Peppard, J. (1998). Consumer purchasing on the Internet: Processes and prospects. *European Management Journal*, 16(5), 600–610. [https://doi.org/10.1016/S0263-2373\(98\)00036-X](https://doi.org/10.1016/S0263-2373(98)00036-X)
- Chowdhury, S., Faruque, M., Sharmin, S., Talukder, T., Mahmud, M., Dastagir, G., & Akter, S. (2024). The impact of social media marketing on consumer behavior: A study of the fashion retail industry. *Open Journal of Business and Management*, 12, 1666–1699. <https://doi.org/10.4236/ojbm.2024.123090>

- Dash, G., Kiefer, K., & Paul, J. (2021). Marketing-to-Millennials: Marketing 4.0, customer satisfaction and purchase intention. *Journal of Business Research*, 122, 608–620. <https://doi.org/10.1016/j.jbusres.2020.10.016>
- Ding, K., Yun Gong, X., Huang, T., & Chong Choo, W. (2024). Recommend or not: A comparative analysis of customer reviews to uncover factors influencing explicit online recommendation behavior in peer-to-peer accommodation. *European Research on Management and Business Economics*, 30(1), 1–18. <https://doi.org/10.1016/j.iiedeen.2023.100236>
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39–50.
- Giza, W., & Wilk, B. (2021). Revolution 4.0 and its implications for consumer behaviour. *Entrepreneurial Business and Economics Review*, 9(4), 195–206. <https://doi.org/10.15678/EBER.2021.090412>
- Goodrich, K., & de Mooij, M. (2013). How ‘social’ are social media? A cross-cultural comparison of online and offline purchase decision influences. *Journal of Marketing Communications*, 20(1–2), 103–116. <https://doi.org/10.1080/13527266.2013.797773>
- Grant, R., Clarke, R. J., & Kyriazis, E. (2010). Research needs for assessing online value creation in complex consumer purchase process behavior. *Journal of Retailing and Consumer Services*, 17(1), 53–60. <https://doi.org/10.1016/j.jretconser.2009.09.004>
- Grewal, D., Hulland, J., Kopalle, P. K., & Karahanna, E. (2020). The future of technology and marketing: A multidisciplinary perspective. *Journal of the Academy of Marketing Science*, 48, 1–8. <https://doi.org/10.1007/s11747-019-00711-4>
- Hamdani, N. A., Muladi, R., & Maulani, G. A. F. (2022). Digital marketing impact on consumer decision-making process. In *Proceedings of the 6th Global Conference on Business, Management, and Entrepreneurship (GCBME 2021)* (pp. 153–158). Atlantis Press.
- Hanaysha, J. R. (2022). Impact of social media marketing features on consumer’s purchase decision in the fast-food industry: Brand trust as a mediator. *International Journal of Information Management Data Insights*, 2(2), 1–10 <https://doi.org/10.1016/j.jjime.2022.100102>
- Hasan, M., & Sohail, M. S. (2020). The influence of social media marketing on consumers’ purchase decision: Investigating the effects of local and nonlocal brands. *Journal of International Consumer Marketing*, 33(3), 350–367. <https://doi.org/10.1080/08961530.2020.1795043>

- Ilieva, G., Yankova, T., Ruseva, M., Dzhabarova, Y., Klisarova-Belcheva, S., & Bratkov, M. (2024). Social media influencers: Customer attitudes and impact on purchase behaviour. *Information*, 15(6), Article 359. <https://doi.org/10.3390/info15060359>
- Javaid, M., Haleem, A., Singh, R. P., Suman, R., & Gonzalez, E. S. (2022). Understanding the adoption of Industry 4.0 technologies in improving environmental sustainability. *Sustainable Operations and Computers*, 3, 203–217. <https://doi.org/10.1016/j.susoc.2022.01.008>
- Khan, S., Tomar, S., Fatima, M., & Khan, M. Z. (2022). Impact of artificial intelligent and industry 4.0 based products on consumer behaviour characteristics: A meta-analysis-based review. *Sustainable Operations and Computers*, 3, 218–225. <https://doi.org/10.1016/j.susoc.2022.01.009>
- Kijek, T., Angowski, M., & Skrzypek, A. (2019). Millennials use of social media in product innovation purchasing processes. *Journal of Computer Information Systems*, 60(1), 9–17. <https://doi.org/10.1080/08874417.2019.1604104>
- Kuncoro, H. A. D. P., & Kusumawati, N. (2021). A study of customer preference, customer perceived value, sales promotion, and social media marketing towards purchase decision of sleeping product in Generation Z. *Advanced International Journal of Business, Entrepreneurship and SMEs*, 3(9), 265–276.
- Liao, S.-H., Widowati, R., & Hsieh, Y.-C. (2021). Investigating online social media users' behaviors for social commerce recommendations. *Technology in Society*, 66, Article 101655. <https://doi.org/10.1016/j.techsoc.2021.101655>
- Liyanaarachchi, G., Mifsud, M., & Viglia, G. (2024). Virtual influencers and data privacy: Introducing the multi-privacy paradox. *Journal of Business Research*, 176, Article 114584. <https://doi.org/10.1016/j.jbusres.2024.114584>
- Ma, Z., Gao, Q., & Chen, Y. (2022). Post-purchase trust in e-commerce: A theoretical framework and a text mining-based assessment method. *International Journal of Human-Computer Interaction*, 39(8), 1643–1661. <https://doi.org/10.1080/10447318.2022.2065046>
- Marzec, D. (2022). Znaczenie influencer marketingu w kształtowaniu decyzji współczesnych konsumentów. *Media i Społeczeństwo*, 16(1), 154–174. <https://orcid.org/10.53052/MiS.2022.16.10>
- Mason, A. N., Narcum, J., & Mason, K. (2021). Social media marketing gains importance after Covid-19. *Cogent Business & Management*, 8(1), Article 1870797. <https://doi.org/10.1080/23311975.2020.1870797>
- Matiukaite, K., Sciukauskas, I., & Usas, A. (2024). The impact of e-WOM aspects on consumer purchase intentions. *Polish Journal of Management Studies*, 30(2), 162–180. <https://doi.org/10.17512/pjms.2024.30.2.10>

- Mensah, K., Dankwah, J. B., Mensah, G., & Masope-Crabbe, J. A. (2021). Choice, purchase decision and post-purchase dissonance: The social media perspective. *Information Management and Business Review*, 13(3), 1–13. [https://doi.org/10.22610/imbr.v13i3\(I\).3209](https://doi.org/10.22610/imbr.v13i3(I).3209)
- Miklošik, A. (2015). Changes in purchasing decision-making process of consumers in the digital era. *European Journal of Science and Theology*, 11(6), 167–176.
- Morić, Z., Dakic, V., Djekic, D., & Regvart, D. (2024). Protection of personal data in the context of e-commerce. *Journal of Cybersecurity and Privacy*, 4(3), 731–761. doi.org/10.3390/jcp4030034
- Mucundorfeanu, M., Balaban, D. C., & Mauer, M. (2024). Exploring the effectiveness of digital manipulation disclosures for Instagram posts on source credibility and authenticity of social media influencers. *International Journal of Advertising*, 44(1), 131–163. <https://doi.org/10.1080/02650487.2024.2381973>
- Muda, M., & Hamzah, M. I. (2021). Should I suggest this YouTube clip? The impact of UGC source credibility on eWOM and purchase intention. *Journal of Research in Interactive Marketing*, 15(3), 441–459. <https://doi.org/10.1108/JRIM-04-2020-0072>
- Nasir, A. V. A., Keserel, A. C., Surgit, O. E., & Nalbant, M. (2012). Segmenting consumers based on social media advertising perceptions: How does purchase intention differ across segments? *Telematics and Informatics*, 64, Article 101687. <https://doi.org/10.1016/j.tele.2021.101687>
- Nowacki, F. (2014). Marketing 4.0–nowa koncepcja w obliczu przemian współczesnego konsumenta. *Marketing i Rynek*, 6(21), 11–19.
- Obukhovich, S., Sipilä, J., & Tarkiainen, A. (2024). Post-purchase effects of impulse buying: A review and research agenda. *Journal of Consumer Behaviour*, 23(3), 1512–1527. <https://doi.org/10.1002/cb.2287>
- Palalic, R., Ramadani, V., Mariam Gilani, S., Gërguri-Rashiti, S., & Dana, L. (2021). Social media and consumer buying behavior decision: What entrepreneurs should know? *Management Decision*, 59(6), 1249–1270. <https://doi.org/10.1108/MD-10-2019-1461>
- Pan, M., Blut, M., Ghiassaleh, A., & Lee, Z. W. Y. (2025). Influencer marketing effectiveness: A meta-analytic review. *Journal of the Academy of Marketing Science*, 53, 52–78. <https://doi.org/10.1007/s11747-024-01052-7>
- Poh, S. Hasan, D. G., & Sudiyono K. A. (2024). The power of social commerce: TikTok's impact on Gen Z consumer purchasing behaviour. *Journal Manajemen dan Bisnis*, 23(2), 501–515. <https://doi.org/10.24123/jmb.v23i2.835>
- Pop, R. A., Săplăcan, Z., Dabija, D. C., & Alt, M. A. (2021). The impact of social media influencers on travel decisions: The role of trust in consumer decision

- journey. *Current Issues in Tourism*, 25(5), 823–843. <https://doi.org/10.1080/13683500.2021.1895729>
- Praditsuwat, N., & Karnreungsiri, I. (2018). Consumer purchasing process in digital market: A case study of small and medium enterprises in Thailand. *Asian Administration & Management Review*, 1(2), 56–70.
- Rahmawati, T., & Nur, A. (2021). Consumer behavior in industrial era 4.0 to avoid market failure. *Jurnal Bisnis dan Akuntansi*, 23(1), 1–12. <https://doi.org/10.34208/jba.v23i1.871>
- Reddy, K. S., & Azeem, B. A. (2022). Impact of social media marketing on online impulse buying behaviour. *Journal of Management and Science*, 12(1), 94–98. <https://doi.org/10.26524/jms.12.18>
- Riaz, M. U., Guang, L. X., Zafar, M., Shahzad, F., Shahbaz, M., & Lateef, M. (2020). Consumers' purchase intention and decision-making process through social networking sites: A social commerce construct. *Behaviour & Information Technology*, 40(1), 99–115. <https://doi.org/10.1080/0144929X.2020.1846790>
- Roszkowska, E. (2001). Typy zachowań konsumenta na rynku – ujęcie w teorii kompleksów reguł. In A. F. Bocian (Ed.), *Rozwój regionalny cele i metody* (pp. 143–158). Wydawnictwo Uniwersytetu w Białymstoku.
- Sabila, A. S., & Albari, A. (2023). The role of social media marketing communication on the Instagram platform in growing consumer buying intention. *Journal of Business and Management Review*, 4(5), 374–389. <https://doi.org/10.47153/jbmr45.6962023>
- Sağtaş, S. (2022). The effect of social media marketing on brand equity and consumer purchasing intention. *Journal of Life Economics*, 9(1), 21–31. <https://doi.org/10.15637/jlecon.9.1.02>
- Sanak-Kosmowska, K., & Wiktor, J. W. (2020). Empirical identification of latent classes in the assessment of information asymmetry and manipulation in online advertising. *Sustainability*, 12(20), Article 8693. <https://doi.org/10.3390/su12208693>
- Shrestha, A., Karki, A., Bhushan, M., Joshi, S., & Gurung, S. (2023). Effects of social media marketing on consumer buying behavior. *New Perspective: Journal of Business and Economics*, 6(1), 74–82. <https://doi.org/10.3126/npjbe.v6i1.58916>
- Singh, P., Sharma, B. K., Arora, L., & Bhatt, V. (2023). Measuring social media impact on impulse buying behavior. *Cogent Business & Management*, 10(3), Article 2262371. <https://doi.org/10.1080/23311975.2023.2262371>
- Skrzypek, A. (2021). Digitalny klient nowej ery – Klient 4.0. *Problemy Jakości*, (7–8), 24–30. <https://doi.org/10.15199/46.2021.7–8.4>
- Sriram, K. V., Namitha, K., P., & Kamath, G. B. (2021). Social media advertisements and their influence on consumer purchase intention. *Cogent Business*

- & Management*, 8(1), Article 2000697. <https://doi.org/10.1080/23311975.2021.2000697>
- Suganda, U. K., & Arrifianti, I. (2023). Analysis of the drivers of consumer purchasing decisions in the digital era: The role of social media marketing, e-service quality, and payment safety. *Quantitative Economics and Management Studies*, 4(1), 1–11
- Suherlan, S., & Okombo, M., O. (2023). Technological innovation in marketing and its effect on consumer behaviour. *Technology and Society Perspectives*, 1(2), 94–103. <https://doi.org/10.61100/tacit.v1i2.57>
- Suri, A., Huang, B., & Sénécal, S. (2023). This product seems better now: How social media influencers' opinions impact consumers' post-failure responses. *International Journal of Electronic Commerce*, 27(3), 297–323. <https://doi.org/10.1080/10864415.2023.2226898>
- Świczak, W. (2017). The impact of modern technology on changing marketing actions in organisations. *Marketing 4.0. Marketing Instytucji Naukowych i Badawczych*, 4(26), 161–186. <https://doi.org/10.14611/minib.26.12.2017.08>
- Szakał, A. C., Brătucu, G., Ciobanu, E., Chițu, I. B., Mocanu, A. A., & Ialomițianu, G. (2024). Exploring influencing marketing-consumer insights and creators' perspectives. *Sustainability*, 16(5), Article 1845. <https://doi.org/10.3390/su16051845>
- Tresa Sebastian, A., Lal, B., Anupama, J., Varghese, J., Agnus Tom, A., Rajkumar, E., Allen, J. G., Jeyavel, S., Pandey, V., Wajid, M., & Romate, J. (2021). Exploring the opinions of the YouTube visitors towards advertisements and its influence on purchase intention among viewers. *Cogent Business & Management*, 8(1), Article 1876545. <https://doi.org/10.1080/23311975.2021.1876545>
- Varghese, S., & Agrawal, M. (2012). Impact of social media on consumer buying behavior. *Saudi Journal of Business and Management Studies*, 6(3), 51–55. <https://doi.org/10.36348/sjbms.2021.v06i03.001>
- Wellman, M. L., Stoldt, R., Tully, M., & Ekdale, B. (2020). Ethics of authenticity: Social media influencers and the production of sponsored content. *Journal of Media Ethics*, 35(2), 68–82. <https://doi.org/10.1080/23736992.2020.1736078>
- Wereda, W., & Woźniak, J. (2019). Building relationships with customer 4.0 in the era of marketing 4.0: The case study of innovative enterprises in Poland. *Social Sciences*, 8(6), Article 177. <https://doi.org/10.3390/socsci8060177>
- Wolniak, R., & Grebski, W. (2023). The customization and personalization of product in Industry 4.0. *Scientific Papers of Silesian University of Technology Organization and Management Series*, (180), 737–752. <https://doi.org/10.29119/1641-3466.2023.180.38>

- Xie, M. (2021). A study on the mechanism of information sharing between customer involvement and new product development. *E3S Web of Conferences*, 235, Article 03038. <https://doi.org/10.1051/e3sconf/202123503038>
- Yang, P., Sheng, H., Yang, C., & Feng, Y. (2024). How social media promotes impulsive buying: Examining the role of customer inspiration. *Industrial Management & Data Systems*, 124(2), 698–723. <https://doi.org/10.1108/IMDS-05-2023-0343>
- Yogesh, F., & Yesha, M. (2014). Effect of social media on purchase decision. *Pacific Business Review International*, 6(11), 45–51.
- Zhang, J. Z., & Chang, C. W. (2021). Consumer dynamics: Theories, methods, and emerging directions. *Journal of the Academy of Marketing Science*, 49, 166–196. <https://doi.org/10.1007/s11747-020-00720-8>