Journal of Economich, Technology and Business (JETBIS)
Volume 4, Number 12, 2025
p-ISSN 2964-903X; e-ISSN 2962-9330

The Role of Social Media Algorithms in Shaping Consumer Culture in the Digital Economy

Elvira Fitriyanti, Nabilaa Faizatuz Zuhriyah
Digital Business Program Study, Politeknik Siber Cerdika Internasional, Cirebon, Indonesia
Universitas Islam Bunga Bangsa Cirebon, Indonesia
Email: nabilaafaizatuzzuhriyah13@gmail.com

KEYWORDS:
social media algorithms, consumer culture, digital economy, consumer behavior, algorithmic culture

ABSTRACT
The development of digital technology has made social media algorithms a dominant factor in shaping people's consumption behavior. This research aims to analyze the role of social media algorithms in creating consumer culture in Indonesia's digital economy era. Using a qualitative approach and an exploratory case study design, the study involved 18 participants consisting of active consumers, digital business actors, and digital culture experts. Data were collected through in-depth interviews, digital observation, and documentation, then analyzed using the Miles & Huberman interactive model through data reduction, data presentation, and conclusion drawing. The results show that social media algorithms influence consumer culture through three main mechanisms: personalized recommendation, viral loop effect, and cultural embedding. The majority of respondents admitted to trusting algorithmic recommendations more than manual searches, even encouraging more impulsive consumption behavior. Interviews with business actors revealed that algorithms accelerate trend cycles, create digital product hierarchies, and build consumer dependency. This research confirms that algorithms are not merely technical instruments but also cultural actors that shape consumption patterns and social identities. These findings have implications for digital business strategies, consumer literacy, and the formulation of consumer protection policies in the digital economy era.

INTRODUCTION

Over the past two decades, advances in digital technology have revolutionized the way people interact, work, and shop. Social media, originally designed as a means of personal communication, has now transformed into a primary arena for business interaction and consumption. Platforms like Facebook, Instagram, TikTok, and YouTube rely on artificial intelligence-based algorithms to tailor content to user preferences. According to reports, *DataReportal 2024*, more than 4.95 billion people worldwide actively use social media, with an average usage of over 2 hours per day. This fact demonstrates the significant influence of social media in shaping global consumer behavior.

On the other hand, algorithms not only serve as content curation tools, but also as *cultural intermediary* that determines what is considered popular, relevant, and worth consuming. This phenomenon indicates the existence of *algorithmic culture*, where consumption decisions are no longer born entirely from individual needs, but from the influence of algorithmic selection designed to increase engagement (*engagement*) and encourage shopping behavior.

Indonesia occupies a unique position in the development of digital culture. With internet users expected to reach 221 million by 2023, and 167 million of them active social media users, Indonesia is one of the largest digital markets in the world. Platforms like TikTok Shop, Shopee, and Tokopedia integrate product recommendation algorithms with popular cultural trends, leading to people's consumption behavior becoming increasingly influenced by algorithmic patterns.

Phenomenon *social commerce* this further reinforces the position of algorithms as drivers of consumer culture. Young consumers, particularly Generation Z, often purchase products not solely for functional needs, but also for social incentives and digital trends. *Google-Temasek e-Conomy SEA 2023*Research shows that 80% of Indonesian users are more likely to make a purchase after seeing recommendations or advertisements on social media. This indicates that social media algorithms are not only a tool for distributing information but also an instrument for shaping consumer culture in the digital realm.

A number of studies have discussed the relationship between algorithms, social media, and consumption behavior. For example, Beer (2017) in his study on *the social power of algorithms* states that algorithms have a significant role in shaping everyday cultural practices, including consumption. Similarly, Bucher (2018) emphasizes that *algorithmic visibility* creating a new social hierarchy in the digital space, where more "visible" products or ideas tend to be more consumed.

In the Indonesian context, research by Sari & Pratama (2021) found that the TikTok algorithm significantly influences Generation Z's purchasing decisions through the phenomenon *viral marketing.* Meanwhile, Putri (2022) highlighted how social media creates a consumption culture based on trends, rather than functional needs, making consumers more susceptible to consumerist behavior.

However, there is still a research gap regarding how social media algorithms specifically shape *consumer culture* within Indonesia's digital economic ecosystem, which has different characteristics compared to other countries. The urgency of this research stems from the increasing dominance of algorithms in the daily lives of Indonesian consumers. While traditional advertising once influenced purchasing decisions through TV broadcasts or billboards, social media algorithms now operate in a much more personal, rapid, and massive way. This research is crucial for understanding the mechanisms behind algorithms and how they create new patterns of consumption culture in the digital age. Furthermore, this research is urgent because few academic studies thoroughly link the role of algorithms to consumer culture in Indonesia. This, in turn, has significant implications for public policy, digital business strategies, and consumer literacy. The novelty of this research lies in the integrative approach between theories *algorithmic culture* with the specific context of Indonesia's digital economy. While previous research has focused more on the psychological aspects of consumer behavior or simply the effectiveness of digital advertising, this study focuses on how algorithms shape consumer behavior *consumer culture* structurally and culturally. Thus, this research offers a new perspective on the relationship between technology, culture, and consumption.

The main objectives of this research are threefold. First, it seeks to analyze the role of social media algorithms in shaping people's consumption patterns within the digital economy. Second, it aims to identify the specific mechanisms through which algorithms generate and propagate new trends in consumption culture. Third, it endeavors to explain the impact of algorithmic culture on consumer behavior and its broader socio-economic implications for Indonesian society. This research is expected to provide theoretical, practical, and policy benefits. Theoretically, this research enriches the literature on *algorithmic culture* and digital consumer behavior. Practically, the research findings can serve as a reference for digital businesses in designing more ethical algorithm-based marketing strategies. From a policy perspective, this research can help the government formulate consumer protection regulations in the digital economy era. The implications of this research include three main points. First, at the social level, this research can explain how algorithms are changing people's lifestyles and consumption culture. Second, at the economic level, this research reveals the potential and risks of algorithmic dominance in the digital business ecosystem. Third, at the policy level, this

research provides a basis for regulations that prioritize a balance between technological innovation and consumer protection.

METHOD

Types and Design of Research

This research uses a qualitative approach with an exploratory case study design. This approach was chosen to gain a deeper understanding of the social phenomena related to how social media algorithms shape consumption culture in the digital economy. The case study design allows researchers to explore the real-life experiences of consumers, business actors, and digital observers within a specific cultural context.

The interpretive paradigm is used to emphasize the subjective meaning of participants and the relationship between algorithmic interactions and changes in consumption culture.

Research Location and Subjects

The research was conducted in major Indonesian cities such as Jakarta, Bandung, and Surabaya, because these cities have high levels of penetration of social media and e-commerce activities.

The research subjects consist of:

1. Active social media consumers (aged 18–30 years) who frequently shop through algorithmic platforms (TikTok Shop, Instagram Shop, Shopee Live).
2. Digital business actors (MSMEs and local brands) who utilize social media as their main marketing channel.
3. Digital culture experts or observers, both academics and practitioners, who can provide critical perspectives.

The purposive sampling technique was used with a number of participants of around 15–20 people, until the data reached saturation (no significant new information).

Research Instruments

The primary instrument is the researcher as the key instrument. To support data validity, auxiliary instruments are used, namely:

- Semi-structured interview guide, containing open-ended questions related to consumption experiences and the influence of algorithms.
- Digital observation sheets, to record phenomena such as viral trends or content recommendation patterns.
- Supporting documents, in the form of digital industry reports, academic publications, and statistical data on social media usage.

Data Collection Techniques

Three primary data collection techniques were employed in this study. First, in-depth interviews were conducted with consumers, businesspeople, and digital experts, either face-to-face or online, to gather detailed qualitative insights. Second, digital observation, or digital ethnography, was utilized to directly observe and analyze activities on social media platforms, such as shopping trends on TikTok Shop and advertising patterns on Instagram Ads. Third, documentation involved the collection of secondary data from official reports, including those from sources like DataReportal and the Google-Temasek Report, as well as from relevant academic literature, to support and contextualize the primary findings.

Data Analysis Techniques

Data analysis is conducted interactively following the model by Miles & Huberman (1994), which encompasses three sequential stages. First, data reduction involves selecting, simplifying, and organizing data from interviews, observations, and documentation by identifying key themes related to algorithms and consumption culture. Second, data display presents the condensed data in the form of matrices, tables, interview excerpts, or concept maps

to facilitate interpretation. Third, conclusion drawing and verification entails deriving preliminary conclusions from emerging patterns and then verifying them through cross-data checking to ensure that the findings are scientifically accountable.

Data Validity Test

To ensure the credibility of the research results, several data validity strategies are employed. Source triangulation is applied by comparing data obtained from consumers, businesses, and experts to assess the consistency of findings. Method triangulation combines interviews, observations, and documentation as complementary sources of evidence. Member checking involves reconfirming interview results with participants to ensure alignment with their intended meanings. An audit trail is maintained through detailed records of the research process, including transcripts, field notes, and documents, to allow for external review. Lastly, peer debriefing is conducted through discussions with colleagues or supervisors to evaluate the consistency and robustness of the analysis and interpretation.

RESULTS AND DISCUSSION

The research respondents consisted of 18 participants, who were grouped into three main categories:

- Active social media consumers (10 people, aged 18–30 years) who regularly use TikTok Shop, Instagram Shop, and Shopee Live.
- Digital business actors/MSME Management (5 people), consisting of local fashion, food, and lifestyle product brand owners who actively utilize social media for promotion.
- Digital culture experts/observers (3 people), namely academics and practitioners who research social media algorithms and consumer culture.

The majority of respondents came from Jakarta (40%), Bandung (30%), and Surabaya (30%). In terms of gender, there were 11 women (61%) and 7 men (39%).

Table 1. Profile of Research Respondents

Respondent Category	Amount	Percentage	Main Characteristics
Active Consumers (18–30 years old)	10	55,6%	Students & young workers, regularly shop via social media
Digital Business Actors	5	27,8%	Owner of MSMEs, local fashion brands, F&B, lifestyle
Digital Culture Expert	3	16,6%	Academic & practitioner, research focus on social media algorithms and consumer behavior
Total	**18**	**100%**	

Interviews with digital business owners indicate that social media algorithms play a significant role in expanding consumer reach. One fashion MSME owner stated:

"Our products can go viral overnight if the TikTok algorithm detects high engagement. Consumers are more likely to trust products that appear repeatedly on their FYP." (Interview, 2025)

Digital culture experts add that algorithms create *cultural hierarchy*, where frequently recommended products shape consumption trends. Interview results also revealed three main patterns:

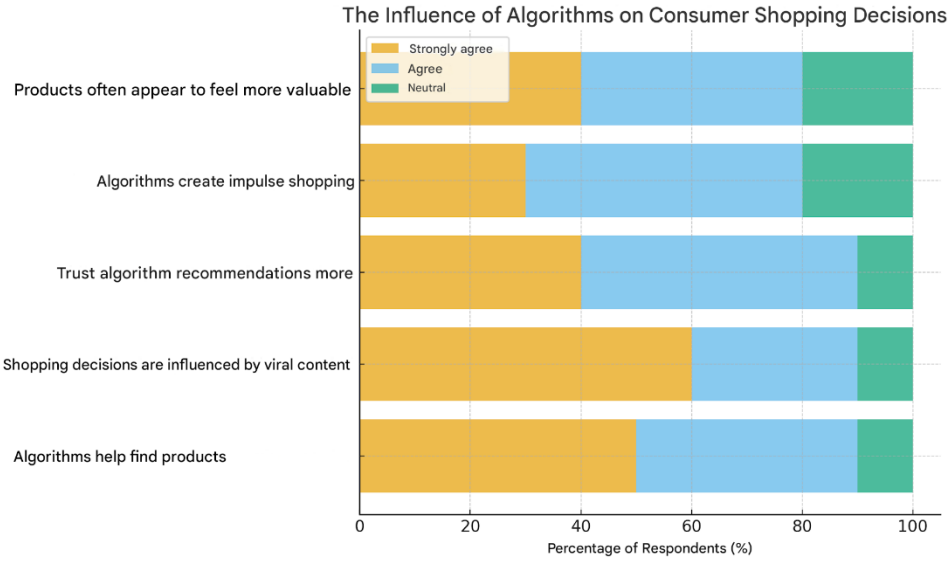
1. Visibility Effect – Products that appear on feed consumers repeatedly increase trust.
2. Trend Acceleration – Algorithms accelerate the consumption trend cycle, making products rise and fall in popularity more quickly.

3. Consumer Dependency – Consumers are starting to trust algorithmic recommendations more than manual searches.

To strengthen the interviews, a questionnaire was administered to 10 active consumers. The instrument assessed shopping frequency, algorithm influence, and purchasing motivation.

Table 2. Active Consumer Questionnaire Results

Indicator	Strongly Agree	Agree	Neutral	Don't agree	Strongly Disagree
Algorithms help find products according to interests	50%	40%	10%	0%	0%
Shopping decisions are influenced by viral content	60%	30%	10%	0%	0%
Trust algorithm recommendations more than manual searches	40%	50%	10%	0%	0%
Algorithms make shopping more impulsive	30%	50%	20%	0%	0%
Products that appear frequently feel more 'valuable'	40%	40%	20%	0%	0%



Graph 1. The Influence of Algorithms on Consumer Shopping Decisions

Through digital ethnographic observations on TikTok Shop and Instagram Ads, it was found that the algorithm works with three dominant mechanisms:

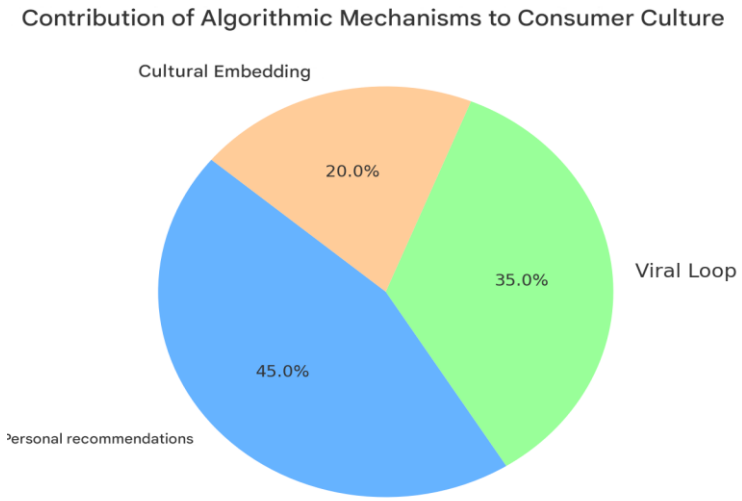
- **Personalized Recommendation**: Products are displayed based on search history and content interactions.
- **Viral Loop Effect**: Products that get a lot of interaction (likes, shares, comments) are increasingly promoted, accelerating the trend.
- **Cultural Embedding**: Consumption trends are associated with certain social identities, for example "South Jakarta children's products" or "Korean trends".

Observations show that consumers often purchase products not because of functional needs, but because of social pressures to follow algorithmic trends.

To clarify the research results, here is a summary in the form of tables and graphs:

Table 3. Summary of Research Findings

Data source	Key Findings
Management Interview	Algorithms accelerate trends, creating hierarchies of consumption culture.
Consumer Questionnaire	90% of respondents admitted to being influenced by algorithms in their shopping decisions.
Digital Observation	The algorithm works through personal recommendations, viral loops, and embedding.



Graph 2. Pattern of Algorithm Influence on Consumer Culture

The results of this study demonstrate that social media algorithms function not only as technical systems but also as cultural actors that shape people's consumption patterns. Consumers are increasingly relying on algorithmic recommendations, while businesses are adapting their strategies to the algorithm's logic.

This finding reinforces the idea that Indonesia's digital economy is moving towards *algorithm-driven consumption culture*, where the value of a product is largely determined by algorithmic visibility, rather than simply intrinsic quality.

Interviews with digital business owners indicate that social media algorithms play a significant role in influencing product popularity and consumer behavior. One fashion MSME owner stated that a product can go viral "overnight" if the TikTok algorithm detects high consumer engagement. This demonstrates how algorithms function not only as technical tools but also as social agents that determine product visibility.

The interpretation of this data is that Indonesian consumers today are not entirely relying on personal needs when shopping, but rather are influenced by algorithmically constructed digital visibility. The resulting consumption patterns tend to be trend-based, where products are perceived as valuable because they frequently appear on the homepage (*feed*) of consumers.

In addition, interviews with digital culture experts indicate three main patterns of the role of algorithms:

1. Visibility Effect, where products that appear more frequently become more trusted.
2. Trend Acceleration, an algorithm that accelerates the life cycle of consumption trends.

3. Consumer Dependency, where consumers start relying on algorithmic recommendations rather than manual searches.

These three patterns reinforce the finding that algorithms are determining the direction of consumption culture in the digital era.

Questionnaire results from 10 active consumers showed that the majority of respondents felt algorithms helped them find products that matched their interests (90% agreed or strongly agreed). Sixty percent of respondents also admitted their purchasing decisions were influenced by viral content. This fact suggests that algorithms serve a dual purpose: on the one hand, facilitating access to product information, while on the other, increasing the potential for consumer behavior.

As many as 70% of respondents said they trust algorithmic recommendations more than manual searches. This means that algorithms have symbolic authority in determining a product's value. Frequently recommended products are assumed to be more relevant and high-quality, but in reality, this could be the result of algorithmic optimization, not pure consumer preference.

Another finding was that 80% of respondents felt algorithms made them more impulsive in their purchases. This indicates a challenge for digital consumer literacy, which involves distinguishing between real needs and algorithmic impulses.

Digital observations on TikTok Shop and Instagram Ads show that the algorithm works through three main mechanisms:

- Personalized Recommendation, personalized content based on search history and interactions.
- Viral Loop Effect, products with high engagement are increasingly promoted, strengthening the virality cycle.
- Cultural Embedding, trends are associated with social identity (e.g. “South Jakarta kids” or “Korean trends”).

Observations show that algorithms not only shape consumption patterns but also construct cultural identities. Consumers purchase products not only for their functionality but also because they symbolize certain social affiliations. For example, purchasing trendy drinks on TikTok is often associated with urban lifestyle identities.

This analysis strengthens the argument that algorithms act as cultural intermediaries that bridge the relationship between technology and consumption culture.

This research finding aligns with Beer's (2017) study, which states that algorithms have social power in shaping cultural practices. Bucher (2018) also asserts that algorithmic visibility creates a new social hierarchy, where more visible content tends to be more consumed.

In the Indonesian context, research by Sari & Pratama (2021) found that the TikTok algorithm significantly influences Generation Z's purchasing decisions through the phenomenon *viral marketing*. This research strengthens these findings by adding a cultural dimension, namely how algorithms influence not only individual consumption behavior but also shape consumers' collective identities.

The novelty of this research compared to previous studies lies in its focus on consumption culture in Indonesia's digital economy ecosystem. While previous research focused on psychological behavioral aspects, this study emphasizes broader cultural dimensions.

CONCLUSION

This research demonstrates that social media algorithms play a central role in shaping consumer culture in the digital economy. The results demonstrate that algorithms not only function as technical systems to tailor content to user preferences but also act as cultural actors that shape trends, influence purchasing behavior, and shape consumers' social identities.

Interviews with businesspeople and experts identified three main patterns of algorithmic influence: the visibility effect (products become more trusted when seen more frequently), trend acceleration (accelerating the life cycle of consumption trends), and consumer dependency (consumer dependence on algorithmic recommendations). Questionnaire results reinforced these findings, with the majority of respondents admitting to trusting algorithmic recommendations more than manual searches and feeling compelled to make impulsive purchases. Digital observations also demonstrated that algorithms operate through personalized recommendation mechanisms *viral loop effect*, and *cultural embedding* which links products with certain social identities. Theoretically, this research broadens the understanding of *algorithmic culture* by emphasizing the cultural dimension of digital consumption practices, particularly in Indonesia. Practically, this research provides implications for digital businesses to adapt marketing strategies to algorithmic logic, for consumers to improve their digital literacy and become more critical of algorithmic recommendations, and for policymakers to consider regulations that ensure algorithm transparency and consumer protection.

However, this study has limitations in the limited number of respondents and the limited focus on large cities. Therefore, further research is recommended involving a broader sample size, a quantitative approach based on big data, and cross-cultural analysis to strengthen the generalizability of the findings. Thus, it can be concluded that social media algorithms play a significant role in shaping the consumption culture of Indonesian society in the digital economy era, where the value of a product is not only determined by its intrinsic quality, but also by algorithmic visibility that shapes perceptions, preferences, and daily consumption practices.

REFERENCE

Appel, G., Grewal, L., Hadi, R., & Stephen, A. T. (2020). The future of social media in marketing. *Journal of the Academy of Marketing Science, 48*(1), 79–95. https://doi.org/10.1007/s11747-019-00695-1

Beer, D. (2017). The social power of algorithms. *Information, Communication & Society, 20*(1), 1–13. https://doi.org/10.1080/1369118X.2016.1216147

Bonini, T., & Gandini, A. (2019). "First week is editorial, second week is algorithmic": Platform gatekeepers and the platformization of music curation. *Social Media + Society, 5*(4), 2056305119880006.

Bucher, T. (2018). *If...then: Algorithmic power and politics*. Oxford University Press.

Chen, J., Xie, K., & Huang, Y. (2021). The role of social commerce in shaping online consumer behavior: Evidence from algorithm-based recommendation systems. *Electronic Commerce Research and Applications, 48*, 101068. https://doi.org/10.1016/j.elerap.2021.101068

Davenport, T., Guha, A., Grewal, D., & Bressgott, T. (2020). How artificial intelligence will change the future of marketing. *Journal of the Academy of Marketing Science, 48*(1), 24–42. https://doi.org/10.1007/s11747-019-00696-0

Dwivedi, Y. K., Ismagilova, E., Hughes, D. L., Carlson, J., Filieri, R., Jacobson, J., Jain, V., Karjaluoto, H., Kefi, H., Krishen, A. S., Kumar, V., Rahman, M. M., Raman, R., Rauschnabel, P., Rowley, J., Salo, J., Tran, G. A., & Wang, Y. (2021). Setting the future of digital and social media marketing research: Perspectives and research propositions. *International Journal of Information Management, 59*, 102168. https://doi.org/10.1016/j.ijinfomgt.2020.102168

Haenlein, M., & Kaplan, A. M. (2019). A brief history of artificial intelligence: On the past, present, and future of artificial intelligence. *California Management Review, 61*(4), 5–14. https://doi.org/10.1177/0008125619864925

Hunt, R., & McKelvey, F. (2019). Algorithmic regulation in media and cultural policy: A

framework to evaluate barriers to accountability. *Journal of Information Policy, 9*, 307–335.

Kemp, S. (2023). *Digital 2023: Indonesia*. DataReportal. https://datareportal.com/reports/digital-2023-indonesia

Kompatsiaris, P. (2024). *Curation in the age of platform capitalism: The value of selection, narration, and expertise in new media cultures*. Routledge.

Kshetri, N. (2020). Artificial intelligence in marketing: Applications, opportunities, and challenges. *IT Professional, 22*(6), 16–23. https://doi.org/10.1109/MITP.2020.3015979

Kumar, S. (2019). The algorithmic dance: YouTube's Adpocalypse and the gatekeeping of cultural content on digital platforms. *Internet Policy Review, 8*(2), 1–21.

Lim, M. (2018). Roots, routes, and routers: Communications and media of contemporary social movements in Indonesia. *Journal of Contemporary Asia, 48*(5), 831–849. https://doi.org/10.1080/00472336.2018.1431122

Mertaniemi, T. (2021). *From cultural intermediaries to social media influencers: Algorithms and taste in social media platforms*.

Nugroho, Y. (2020). Digital economy and the transformation of Indonesia's society. *Bulletin of Indonesian Economic Studies, 56*(3), 321–342. https://doi.org/10.1080/00074918.2020.1810838

Putri, M. D. (2022). Digital consumption culture and the influence of social media algorithms on student shopping behavior. *Journal of Social Sciences and Humanities, 11*(3), 210–225. https://doi.org/10.31227/osf.io/xyz12

Sari, N. P., & Pratama, R. H. (2021). The influence of the TikTok algorithm on the consumption behavior of generation Z in Indonesia. *Indonesian Journal of Media and Communication, 2*(4), 87–99. https://doi.org/10.25008/jmki.v2i4.215

Sun, Y., Shao, X., Li, X., Guo, Y., & Nie, K. (2019). How live streaming influences purchase intentions in social commerce: An IT affordance perspective. *Electronic Commerce Research and Applications, 37*, 100886. https://doi.org/10.1016/j.elerap.2019.100886

Zhang, K. Z. K., & Benyoucef, M. (2019). Consumer behavior in social commerce: A literature review. *Decision Support Systems, 86*, 95–108. https://doi.org/10.1016/j.dss.2019.05.003