

## THE INFLUENCE OF ARGUMENT QUALITY AND INFORMATION RICHNESS ON TRUST IN HALAL COSMETIC REVIEWS

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**Abstract:** In the digital age, halal cosmetic products are becoming increasingly popular. Online reviews play an important role in consumers' purchasing decisions, as they cannot see and check the quality of the products directly, but only through the screens of their gadgets. Under Islamic law, the consumption of halal cosmetics is not only obligatory but also a lifestyle choice. The purpose of this study was to examine the effect of argument quality and information richness on perceptions of information quality and trustworthiness of halal product reviews on the Shopee platform. We utilized a survey design involving 120 participants and applied ANOVA with a regression approach for analysis. Our results show that argument quality and information richness have a positive impact on perceived information quality. Furthermore, perceived information quality positively affects trust in halal product reviews. The results highlight the importance of providing high quality arguments and information in online reviews to increase consumer trust in halal cosmetic products. Furthermore, this study highlights the role of the Shopee platform in shaping consumer perceptions of online reviews, especially in the context of halal cosmetics. Marketers can use these findings to enhance their brand credibility and increase consumer trust through high-quality online product reviews. This study is useful for muslim marketers so that they can increase sales by motivating consumers to provide quality reviews that can be adopted by other consumers.

**Keywords:** *digital marketing, halal cosmetic, marketplace, Islamic law, consumer review*

**Abstrak:** Di era digital, popularitas produk kosmetik halal semakin meningkat. Review online sangat penting dalam pembelian karena konsumen mengandalkan informasi dari gadget tanpa melihat produk langsung. Konsumsi kosmetik halal adalah keharusan dalam Islam dan harus menjadi gaya hidup. Penelitian ini menguji pengaruh kualitas argumen dan kekayaan informasi terhadap persepsi kualitas informasi dan kepercayaan ulasan produk halal di Shopee. Dengan survei kepada 120 responden dan analisis ANOVA dengan pendekatan regresi, ditemukan bahwa argumen berkualitas dan informasi yang kaya positif mempengaruhi persepsi kualitas informasi, yang meningkatkan kepercayaan ulasan produk halal. Hasil ini menekankan pentingnya ulasan berkualitas tinggi untuk kepercayaan konsumen pada kosmetik halal. Penelitian ini menyoroti peran Shopee dalam membentuk persepsi konsumen terhadap ulasan online. Para pemasar Muslim dapat menggunakan temuan ini untuk meningkatkan kredibilitas merek dan kepercayaan pelanggan melalui ulasan online yang berkualitas. Studi ini bermanfaat bagi pemasar untuk meningkatkan penjualan dengan motivasi kepada konsumen agar memberikan ulasan berkualitas yang dapat diadopsi oleh konsumen lain.

**Kata kunci:** *hukum Islam; kosmetik halal; marketplace; pemasaran digital; ulasan konsumen*

## INTRODUCTION

Technology is rapidly advancing, and its expanding usage is facilitating human activities. One of these advancements is the ease of online shopping for consumers<sup>1</sup>. Consumers no longer need to visit physical stores; they can use their smartphones to purchase desired products. Internet technology has increased the interest of the public in online shopping<sup>2</sup>. Furthermore, with the presence of the COVID-19 pandemic, consumers have become more accustomed to shopping online<sup>3</sup>. Online shopping offers various benefits to consumers, such as efficiency and lower product prices<sup>4</sup>, as well as the absence of spatial and temporal limitations<sup>5</sup>. This allows consumers to shop anytime and anywhere.

The remarkable development of information and communication technology (ICT) has resulted in rapid growth of e-commerce in various fields, including agriculture, finance, industry, cosmetics, and more<sup>6</sup>. Shopping through online platforms, where sellers and buyers meet, is referred to as e-commerce<sup>7</sup>. E-commerce is also defined as the exchange of goods, services, and information through computer networks<sup>8</sup>. Many Indonesian consumers enjoy shopping through e-commerce platforms. This is evidenced by a survey conducted by NielsenIQ<sup>9</sup>, which recorded that the number of e-commerce users reached 32 million consumers in 2021, an

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<sup>1</sup> Mohammad Arief, Rita Indah Mustikowati, and Yustina Chrismardani, 'Why Customers Buy an Online Product? The Effects of Advertising Attractiveness, Influencer Marketing and Online Customer Reviews', *LBS Journal of Management & Research* 21, no. 1 (2023): 81-99, <https://doi.org/10.1108/lbsjmr-09-2022-0052>.

<sup>2</sup> Shu Hao Chang et al., 'The Mediation of Cognitive Attitude for Online Shopping', *Information Technology and People* 29, no. 3 (2016): 618-46, <https://doi.org/10.1108/IITP-08-2014-0172>.

<sup>3</sup> Eli Sumarliah, Safer Ullah Khan, and Ikram Ullah Khan, 'Online Hijab Purchase Intention: The Influence of the Coronavirus Outbreak', *Journal of Islamic Marketing* 12, no. 3 (2021): 598-621, <https://doi.org/10.1108/JIMA-09-2020-0302>.

<sup>4</sup> Mohammad Arief, 'Marketing Analysis: Security and Public Trust Online Shopping at Shopee.Co.Id', *Enrichment: Journal of Management* Vol.11, no. No.2 (2021): Pages 345-352, [www.enrichment.iocspublisher.org](http://www.enrichment.iocspublisher.org).

<sup>5</sup> Linda Salim, Sulaiman Sajilan, and Ilham Sentosa, 'A Review of the Factors Influencing E-Shoppers Behaviour towards Online Shopping', *International Journal of Academic Research in Business and Social Sciences* 7, no. 2 (2017): 458, [www.hrmar.comurl:http://dx.doi.org/10.6007/IJARBS/v7-i2/2655](http://www.hrmar.comurl:http://dx.doi.org/10.6007/IJARBS/v7-i2/2655).

<sup>6</sup> Lin Li, Junyan Zhao, and Liping Wang, 'The Evaluation of China's Insurance e-Commerce Website Running Based on Entropy Theory', *2010 International Conference on Computer Design and Applications, ICCDA 2010* 2, no. 2-126 (2010), <https://doi.org/10.1109/ICCDA.2010.5541147>.

<sup>7</sup> Brian Cahyo Adyanto and Suryono Budi Santosa, 'PENGARUH KUALITAS LAYANAN, BRAND IMAGE, HARGA DAN KEPERCAYAAN PRODUK TERHADAP KEPUTUSAN PEMBELIAN (Studi Layanan E-Commerce Berrybenka.Com)', *Diponegoro Journal of Management* 7, no. 1 (2018): 1-20, <http://ejournal-s1.undip.ac.id/index.php>.

<sup>8</sup> Mark Yi Cheon Yim, Shu Chuan Chu, and Paul L. Sauer, 'Is Augmented Reality Technology an Effective Tool for E-Commerce? An Interactivity and Vividness Perspective', *Journal of Interactive Marketing* 39, no. 1 (2017): 89-103, <https://doi.org/10.1016/j.intmar.2017.04.001>.

<sup>9</sup> NielsenIQ, 'FMCG Trends in Asia Pacific: E-Commerce and Health and Wellness Lead the Way', 2021.

increase of 88% compared to 2022 (17 million users). Moreover, according to the We Are Social Research Report, 178.9 million Indonesian people shopped online during the period of 2022-2023, representing a yearly increase of 12.8%. The estimated value of online shopping throughout 2022 amounted to IDR 851 trillion, indicating the high potential of online businesses in Indonesia.

Indonesian consumers are predominantly Muslim due to the fact that Indonesia has the largest Muslim population in the world<sup>10</sup>. The number of Muslims in Indonesia reached 241.7 million people in 2022<sup>11</sup>. The expenditure of Indonesian Muslim consumers on halal products and services is projected to increase by 14.96% in 2025, reaching USD 281.6 billion. This makes Indonesia the largest halal consumer market in the world. For Muslim consumers, consuming halal products is an obligation and a rule in Islam that must be fulfilled<sup>12</sup>. This not only applies to the products themselves but also to the raw materials, production processes, packaging, and distribution, all of which must comply with Islamic principles<sup>13</sup>.

One highly popular sector in the halal industry is cosmetics. According to the State of the Global Islamic Economy Report 2019/2020, global spending on the halal industry reached USD 2.2 trillion in 2018, with pharmaceutical and halal cosmetic products accounting for USD 156 million. Furthermore, based on the State of the Global Islamic Economy Report 2020/2021, the projected value of the halal cosmetics industry in 2024 is expected to reach 2.9%. This promising growth outlook warrants further exploration of halal cosmetics marketing strategies. Halal cosmetics differ from regular cosmetics as they must be free from by-products and preservatives derived from pigs (such as gelatin), alcohol, and other prohibited substances according to Islamic principles<sup>14</sup>.

In its development, the halal cosmetics industry also markets its products online, including on e-commerce platforms. In Indonesia, there are various e-commerce platforms, namely Shopee, Lazada, Tokopedia, BliBli, Bukalapak, Olx, and others<sup>15</sup>. The most widely used e-commerce platform with rapid user growth is Shopee. Based on SimilarWeb data, Shopee has the highest number of visits in

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<sup>10</sup> Pew Research Center, 'Muslim Population of Indonesia', 2020.

<sup>11</sup> Statista, 'Share of Indonesian Population in 2022, by Religion', 2022, <https://www.statista.com/statistics/1113891/indonesia-share-of-population-by-religion/>.

<sup>12</sup> Kenji Sugibayashi et al., 'Halal Cosmetics: A Review on Ingredients, Production, and Testing Methods', *Cosmetics* 6, no. 3 (2019): 1-17, <https://doi.org/10.3390/cosmetics6030037>.

<sup>13</sup> Hasan Al-Banna and Syayyidah Maftuhatul Jannah, 'The Push, Pull, and Mooring Effects toward Switching Intention to Halal Cosmetic Products', *Journal of Islamic Marketing* 14, no. 9 (2023): 2149-66, <https://doi.org/10.1108/JIMA-12-2021-0392>.

<sup>14</sup> Suraiya Ishak et al., 'Cosmetics Purchase Behavior of Educated Millennial Muslim Females', *Journal of Islamic Marketing* 11, no. 5 (2020): 1055-71, <https://doi.org/10.1108/JIMA-01-2019-0014>.

<sup>15</sup> Basrah Saidani, Lisa Monita Lusiana, and Shandy Aditya, 'Analisis Pengaruh Kualitas Website Dan Kepercayaan Terhadap Kepuasan Pelanggan Dalam Membentuk Minat Pembelian Ulang Pada Pelanggan Shopee', *Jurnal Riset Manajemen Sains Indonesia* 10, no. 2 (2019): 425-44.

Indonesia, reaching 179 million visits. Several halal cosmetic brands have already implemented marketing on Shopee due to its large user base, including Wardah, Emina, Viva, Maybelline, and others<sup>16</sup>.

However, despite the convenience and benefits offered to consumers, online shopping has some disadvantages. When shopping online, consumers experience uncertainty about the quality of products sold on e-commerce platforms because they cannot physically inspect the products<sup>17</sup>, and they worry that the products may not meet their expectations<sup>18</sup>. To minimize the risks involved, consumers tend to rely on reviews from other customers who have purchased similar products.

Online reviews are evaluations of a product conveyed by consumers through the internet<sup>19</sup>. Online reviews have become essential for consumers to obtain product information<sup>20</sup>. According to consumers, online reviews are considered more honest and credible compared to information provided by sellers<sup>21</sup>. This is because online reviews by consumers are perceived as more genuine. Customer online reviews are part of electronic Word of Mouth<sup>22</sup> and significantly influence consumers' purchasing decisions. A dissatisfied customer who spreads negative electronic word-of-mouth through the internet has been proven to result in the loss of many existing customers and thwart the intentions of potential customers<sup>23</sup>. Online reviews are regarded as useful information for consumers if the reviews are deemed credible, beneficial, and relevant. Therefore, the quality of online reviews is crucial. The extent to which online reviews are considered high-quality by consumers is referred to as perceived information quality. The higher the quality of online reviews created by consumers;

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<sup>16</sup> Cindy Mutia Annur, 'Ini Situs E-Commerce Dengan Pengunjung Terbanyak per Agustus 2022', Databoks, 2022, <https://databoks.katadata.co.id/datapublish/2022/09/20/ini-situs-e-commerce-dengan-pengunjung-terbanyak-per-agustus-2022#:~:text=Menurut data Similarweb%2C pada Agustus,2 juta pada Juli 2022.>

<sup>17</sup> Prashant Bhat et al., 'Data Privacy in E-Commerce' 3, no. 3 (2018): 1448-53.

<sup>18</sup> Chang et al., 'The Mediation of Cognitive Attitude for Online Shopping'.

<sup>19</sup> Linlin Zhu et al., 'How Online Reviews Affect Purchase Intention: A New Model Based on the Stimulus-Organism-Response (S-O-R) Framework', *Aslib Journal of Information Management* 72, no. 4 (2020): 463-88, <https://doi.org/10.1108/AJIM-11-2019-0308>.

<sup>20</sup> Inés López-López and José Francisco Parra, 'Is a Most Helpful EWOM Review Really Helpful? The Impact of Conflicting Aggregate Valence and Consumer's Goals on Product Attitude', *Internet Research* 26, no. 4 (2016): 827-44, <https://doi.org/10.1108/IntR-07-2014-0176>.

<sup>21</sup> Kristopher Floyd et al., 'How Online Product Reviews Affect Retail Sales: A Meta-Analysis', *Journal of Retailing* 90, no. 2 (2014): 217-32, <https://doi.org/10.1016/j.jretai.2014.04.004>.

<sup>22</sup> Nga N. Ho-Dac, Stephen J. Carson, and William L. Moore, 'The Effects of Positive and Negative Online Customer Reviews: Do Brand Strength and Category Maturity Matter?', *Journal of Marketing* 77, no. 6 (2013): 37-53, <https://doi.org/10.1509/jm.11.0011>.

<sup>23</sup> Kichan Nam et al., 'Dissatisfaction, Disconfirmation, and Distrust: An Empirical Examination of Value Co-Destruction through Negative Electronic Word-of-Mouth (EWOM)', *Information Systems Frontiers* 22, no. 1 (2020): 113-30, <https://doi.org/10.1007/s10796-018-9849-4>.

the more interest other consumers have in making purchases<sup>24</sup>. Consumers decide to make purchasing decisions only if the reviews are perceived as high-quality<sup>25</sup>. Hence, it is important for sellers and marketers to understand the factors that shape perceived information quality in product reviews to enhance the sales of halal cosmetics.

Previous research on consumer online reviews has mainly focused on examining the influence of online reviews on consumer behavior. For example, studies by Medeková<sup>26</sup> and Arief<sup>27</sup> have investigated the effects of e-WOM on purchase intention and tourism supply. Previous studies have also largely focused on the impact of review valence and volume<sup>28</sup>. However, there is still limited research that specifically looks into the factors that contribute to consumers perceiving online reviews as having high information quality. Yet, high-quality online reviews serve as a foundation for consumers in making purchasing decisions<sup>29</sup>. Furthermore, in the context of halal products, research has primarily focused on halal food, with only a few studies investigating halal cosmetics<sup>30</sup>. Some studies have explored the role of halal cosmetics and consumers' intention to purchase halal cosmetics<sup>31</sup>. Therefore, this

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<sup>24</sup> Eun Ju Lee and Soo Yun Shin, 'When Do Consumers Buy Online Product Reviews? Effects of Review Quality, Product Type, and Reviewer's Photo', *Computers in Human Behavior* 31, no. 1 (2014): 356–66, <https://doi.org/10.1016/j.chb.2013.10.050>.

<sup>25</sup> Christy M.K. Cheung and Dimple R. Thadani, 'The Impact of Electronic Word-of-Mouth Communication: A Literature Analysis and Integrative Model', *Decision Support Systems* 54, no. 1 (2012): 461–70, <https://doi.org/10.1016/j.dss.2012.06.008>.

<sup>26</sup> Kristína Medeková, Kristína Pompurová, and Ivana Šimočková, 'The Electronic Word-of-Mouth (EWOM) Focusing Studies on Tourism Research', in *Online Reputation Management in Destination and Hospitality: What We Know, What We Need To Know* (Emerald Publishing Limited., 2023), 29–49, <https://doi.org/10.1108/978-1-80382-375-120231002>.

<sup>27</sup> Arief, Mustikowati, and Chrismardani, 'Why Customers Buy an Online Product? The Effects of Advertising Attractiveness, Influencer Marketing and Online Customer Reviews'.

<sup>28</sup> Ewa Masłowska, Edward C. Malthouse, and Vijay Viswanathan, 'Do Customer Reviews Drive Purchase Decisions? The Moderating Roles of Review Exposure and Price', *Decision Support Systems* 98 (2017): 1–9, <https://doi.org/10.1016/j.dss.2017.03.010>; Nathalia Purnawirawan et al., 'A Meta-Analytic Investigation of the Role of Valence in Online Reviews', *Journal of Interactive Marketing* 31 (2015): 17–27, <https://doi.org/10.1016/j.intmar.2015.05.001>; Xinyuan (Roy) Zhao et al., 'The Influence of Online Reviews to Online Hotel Booking Intentions', *International Journal of Contemporary Hospitality Management* 27, no. 6 (2015): 1343–64, <https://doi.org/10.1108/IJCHM-12-2013-0542>.

<sup>29</sup> Lee and Shin, 'When Do Consumers Buy Online Product Reviews? Effects of Review Quality, Product Type, and Reviewer's Photo'.

<sup>30</sup> John Ireland and Soha Abdollah Rajabzadeh, 'UAE Consumer Concerns about Halal Products', *Journal of Islamic Marketing* 2, no. 3 (20 September 2011): 274–83, <https://doi.org/10.1108/17590831111164796>; Arshia Mukhtar and Muhammad Mohsin Butt, 'Intention to Choose Halal Products: The Role of Religiosity', *Journal of Islamic Marketing* 3, no. 2 (2012): 108–20, <https://doi.org/10.1108/17590831211232519>; Abdul Hafaz Ngah et al., 'Intention to Purchase Halal Cosmetics: Do Males and Females Differ? A Multigroup Analysis', *Cosmetics* 8, no. 1 (2021): 1–14, <https://doi.org/10.3390/cosmetics8010019>; Shadma Shahid, Faheem Ahmed, and Uzma Hasan, 'A Qualitative Investigation into Consumption of Halal Cosmetic Products: The Evidence from India', *Journal of Islamic Marketing* 9, no. 3 (2018): 484–503, <https://doi.org/10.1108/JIMA-01-2017-0009>.

<sup>31</sup> Muniaty Aisyah, 'Consumer Demand on Halal Cosmetics and Personal Care Products in Indonesia', *Al-Iqtishad: Journal of Islamic Economics* (LP2M Universitas Islam Negeri (UIN) Syarif Hidayatullah Jakarta, 2016), <https://doi.org/10.15408/aiq.v9i1.1867>; Ahasanul Haque et al., 'Muslim

study aims to fill the gap regarding consumer online reviews of halal cosmetics and identify factors that contribute to the perception of high-quality online reviews, which consumers adopt in their purchasing decisions.

In the realm of online reviews, some researchers propose paying attention to the aspects of argument quality and modality to generate online reviews with high information quality. For instance, Chen<sup>32</sup> suggest using media modality that offers media richness to enhance potential buyers' trust in the conveyed online reviews. Aljukhadar<sup>33</sup> found that information quality in online reviews is influenced by media modality, stating that high media richness modalities (such as videos) are better at providing quality information compared to lower media richness modalities (such as text and images). Furthermore, reviews perceived as having high information quality are those with high-quality arguments, providing accurate, relevant, and credible information<sup>34</sup>. However, empirical research examining the distinct influence of argument quality and different media modalities on perceived information quality is scarce and requires further investigation<sup>35</sup>.

This study uses an experimental approach to investigate the effects of argument quality and media modality on perceived information quality and consumer trust in online reviews, with a specific focus on halal cosmetics on the Shopee platform. This research has three primary objectives: first, to explore how different modalities of presenting online reviews affect perceived information quality; second, to examine the influence of argument quality in online reviews on perceived information quality; and third, to assess how perceived information quality affects consumer trust in these reviews. Through this exploration, the study seeks to elucidate the dynamics between content presentation and consumer perception in the context of e-commerce.

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Consumers' Purchase Behavior towards Halal Cosmetic Products in Malaysia', *Management Science Letters* 8, no. 12 (2018): 1305–18, <https://doi.org/10.5267/j.msl.2018.9.009>; Abdul Hafaz Ngah et al., 'I Love My Cosmetics: Educated Young Muslim's Behaviour of Non-Halal Certified Cosmetics', *Journal of Islamic Marketing*, 2022, <https://doi.org/10.1108/JIMA-06-2021-0196>.

<sup>32</sup> Chia Chen Chen and Ya Ching Chang, 'What Drives Purchase Intention on Airbnb? Perspectives of Consumer Reviews, Information Quality, and Media Richness', *Telematics and Informatics* 35, no. 5 (2018): 1512–23, <https://doi.org/10.1016/j.tele.2018.03.019>.

<sup>33</sup> Muhammad Aljukhadar and Sylvain Senecal, 'Communicating Online Information via Streaming Video: The Role of User Goal', *Online Information Review* 41, no. 3 (2017): 378–97, <https://doi.org/10.1108/OIR-06-2016-0152>.

<sup>34</sup> Jo Mackiewicz and Dave Yeats, 'Product Review Users' Perceptions of Review Quality: The Role of Credibility, Informativeness, and Readability', *IEEE Transactions on Professional Communication* 57, no. 4 (2014): 309–24, <https://doi.org/10.1109/TPC.2014.2373891>.

<sup>35</sup> Linlin Zhu et al., 'What Influences Online Reviews' Perceived Information Quality?: Perspectives on Information Richness, Emotional Polarity and Product Type', *Electronic Library* 38, no. 2 (2020): 273–96, <https://doi.org/10.1108/EL-09-2019-0208>.

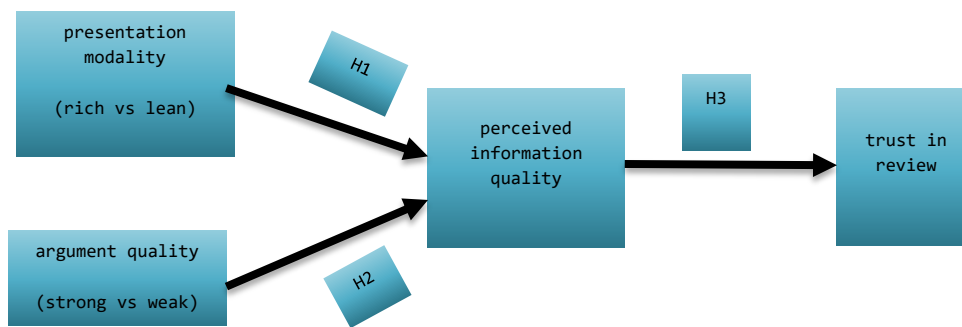


Figure 1. presents the research model in this study.

To explore the hypotheses, the study employed an experimental design as depicted in Figure 1. A 2 x 2 between-subjects factorial design was utilized, examining rich versus lean and strong versus weak. The experiment exposed participants to an initial halal cosmetic online review on Shopee with both strong and weak arguments and subsequently presented them with either images or audio-visual in either lean or rich modality.

The study participants were Indonesian undergraduate university students. They were chosen because they represent the age range of the largest e-commerce users<sup>36</sup>. The participants comprised female Muslim students who possessed Shopee accounts and made purchases on the e-commerce platform. Their ages ranged from 18 to 24 years old, and the total number of participants was 120, calculated as 2 x 2 x 30. In experimental research, a minimum of 30 participants is required in each treatment group<sup>37</sup>.

The participant survey consists of three sections: an initial screening, an assessment of the perceived quality of the information and confidence in the review, and demographic data. It employs formal and precise language with clear definitions and standardized footnote formatting. Analytical techniques comprise ANOVA for evaluating the effects of presentation mode and argument quality, and linear regression for investigating the correlation between perception of information quality and trust in reviews.

<sup>36</sup> NapoleonCat, 'Instagram Users in Indonesia (January)', Napoleoncat.Com, 2023, <https://napoleoncat.com/stats/instagram-users-in-indonesia/2023/01/>.

<sup>37</sup> Joseph F. Hair, Christian M. Ringle, and Marko Sarstedt, 'Partial Least Squares Structural Equation Modeling: Rigorous Applications, Better Results and Higher Acceptance', *Long Range Planning* 46, no. 1-2 (2013): 1-12, <https://doi.org/10.1016/j.lrp.2013.01.001>.

## DISCUSSION

### 1.1 Participant Demographics

The following is the demographic data of respondents (table 1). Demographic data is related to age, domicile, average monthly cosmetic shopping, university origin, semester and study program taken by the respondent. This demographic data serves to show the age distribution of respondents, the average amount of cosmetics purchased each month, domicile and so on. Based on the data, most respondents were 19 years old (37%), most were from the city of Surabaya (28%), most spent IDR 51,000 - 100,000 (43%) a month on cosmetics.

Table 1. Participant Demographics

	Variable	Quantity	Percentage
Age	17	1	1%
	18	12	12%
	19	37	37%
	20	24	24%
	21	17	17%
	22	18	18%
	23	2	2%
	24	5	5%
	25	2	2%
	27	1	1%
	29	1	1%
	Domicile (City)	Medan	1
Sidoarjo		17	17%
Surabaya		28	28%
Bondowonso		1	1%
Mojokerto		2	2%
Magetan		1	1%
Jombang		4	4%
Pasuruan		1	1%
Banyuwangi		8	8%
Kediri		2	2%
Gresik		3	3%
Blitar		1	1%
Trenggalek		1	1%
Lamongan		1	1%
Ponorogo		1	1%
Purwokerto		1	1%
Palembang		7	7%
Jawa Tengah		1	1%
Jember		1	1%
Bandung		5	5%
Jakarta	16	16%	
Lampung	3	3%	
Jogja	1	1%	



	Variable	Quantity	Percentage
	Serang	1	1%
	Bekasi	3	3%
	Kendari	1	1%
	Sleman	1	1%
	Semarang	3	3%
	Malang	2	2%
	Banjarmasin	1	1%
	Surakarta	1	1%
Average monthly cosmetic shopping	Less than Rp 50.000	16	16%
	Rp 51.000 - 100.000	43	43%
	Rp 101.000 - 200.000	29	29%
	201.000 - 300.000	18	18%
	301.000 - 400.000	4	4%
	401.000 - 500.000	4	4%
University	UIN Raden Fatah	3	3%
	Universitas Tarumanegara	2	2%
	Universitas Trisakti	2	2%
	Universitas Negeri Medan	1	1%
	Universitas Negeri Jakarta	1	1%
	Universitas Negeri Surabaya	50	50%
	Universitas Jember	9	9%
	UIN Sayyid Ali Tulungagung	1	1%
	STIKOM	1	1%
	UIN Surabaya	2	2%
	Perbanas	1	1%
	Universitas Jendral Sudirman	1	1%
	Gaja Mada	3	3%
	Universitas Gajah Mada	1	1%
	Poltekes Bandung	1	1%
	Cipasang	3	3%
	UIN Raden Intan	2	2%
	STMM MMTC Yogyakarta	1	1%
	Univ Setia Budhi Rangkasbitung	1	1%
	IAIN Syekh Nurjati	1	1%
	Universitas Terbuka	2	2%
	Universitas Halu Oleo	1	1%
	Universitas Hasyim Asy'ari	1	1%
	Universitas Muhammadiyah Surakarta	1	1%
	Universitas Negeri Yogyakarta	1	1%
	Unusida	1	1%
	Universitas Muhammadiyah Malang	2	2%
	Universitas Gunadarma	4	4%
	Universitas Pasundan	2	2%
	Universitas Yarsi	2	2%
	UIN Sunan Gunung Jati	2	2%
	Borobudor University	1	1%
Universitas Negeri Malang	1	1%	

	Variable	Quantity	Percentage
Semester	Multimedia Nusantara	1	1%
	Universitas Muhammadiyah Semarang	1	1%
	Universitas Tridinanti	1	1%
	UPN Veteran	1	1%
	Universitas Dian Nuswantoro	2	2%
	Binus	1	1%
	Universitas Udayana	1	1%
	UIN Antarasari	1	1%
	Universitas Lampung	1	1%
	1	7	7%
2	40	40%	
3	7	7%	
4	24	24%	
5	9	9%	
6	8	8%	
7	4	4%	
8	21	21%	
Study Program	Mathematics	1	1%
	Education Management	1	1%
	Geography	1	1%
	Islamic economics	34	34%
	Public health	2	2%
	Economic Education	2	2%
	Indonesian language and literature education	3	3%
	Office Administration Education	1	1%
	Accounting education	2	2%
	Commerce Education	1	1%
	Economy	8	8%
	Digital Business	1	1%
	Informatics Management	3	3%
	Fashion Education	1	1%
	Islamic Family Law	1	1%
	Technology	1	1%
	Economics	1	1%
	Accountancy	5	5%
	D3 Business Administration	1	1%
	Undergraduate	1	1%
	Health	1	1%
	Nursing	2	2%
	Geography Education	6	6%
	Education	3	3%
	Information and Communication Management	1	1%
	PGSD	2	2%
	History of Islamic Civilization	1	1%
	Management	8	8%
	Arabic Language Education	1	1%

Variable	Quantity	Percentage
Information Technology	1	1%
Islamic Education Management	1	1%
Psychology	9	9%
Communication Studies	2	2%
Library and Information Science	2	2%
English Education	2	2%
Mathematics College	2	2%
Political science	3	3%
Informatics	1	1%

## 1.2 Validity and Reliability

Reliability testing was carried out by comparing alpha with a value of 0.7. Where if Cronbach alpha ( $\alpha$ ) is greater than 0.7 then the statement items in the questionnaire are reliable<sup>38</sup>. The Cronbach's  $\alpha$ s for perceived information quality and trust in review each are 0.910 and 0.822, that shows good construct reliability. The convergent validity included factors for all items that approach  $> 0.50$  and are significant ( $p < 0.05$ ). Cronbach  $\alpha$  values and validity are presented in Table 2.

Table 2. Validity and Reliability Test

Variabel	Item	Pearson correlation	Cronbach' s Alpha
Perceived information quality	PIQ1	0.778	0.910
	PIQ2	0.797	
	PIQ3	0.638	
	PIQ4	0.779	
	PIQ5	0.831	
	PIQ6	0.776	
	PIQ7	0.811	
	PIQ8	0.755	
	PIQ9	0.702	
Trust in Review	TIR1	0.865	0.822
	TIR2	0.882	
	TIR3	0.833	

<sup>38</sup> W Kurniawan A and Z Puspitaningtyas, *Penelitian Kuantitatif, Metode Penelitian Kuantitatif, Google Books* (Bandung: Pustaka Setia, 2016).

### 1.3 The Main Result of ANOVA

The ANOVA test was carried out to test hypotheses 1 and 2 because it uses experiments. The ANOVA test results can be seen in table 3 below:

Table 3. The Main Results of ANOVA

Independent Variables		Mean	Std. Deviation	Sig.
Presentation modality	Lean	4.0093	0.59583	0.005
	Rich	4.3093	0.56140	
Argument quality	Weak	4.0093	0.59583	0.005
	Strong	4.3093	0.56140	

ANOVA test was conducted to examine the main effects of presentation modality and argument quality on trust in review. The main effects that differ from presentation modality (lean on rich) on trust in review (H1) was predicted. The results of the ANOVA main effect confirm a significant main effect for trust in review ( $p < 0.05$ ). Halal cosmetic review on Shopee result in higher trust in review when using rich modality (video) ( $M = 4.3093$ ,  $SD = .56140$ ) compared to lean modality (picture) ( $M = 4.0093$ ,  $SD = .59583$ ). Likewise, the main effect, which was hypothesized for trust in review, was supported ( $p < 0.05$ ). Halal cosmetic review on Shopee result in higher trust in review when using strong argument quality ( $M = 4.3093$ ,  $SD = .56140$ ) compared to celebrity endorser ( $M = 4.3093$ ,  $SD = .59583$ ). Therefore, H1 and H2 were supported (see table 3). This means that consumers consider reviews presented using rich modality (text and video) to be of higher quality in providing information compared to reviews presented using lean modality (text and images). Apart from that, the results of this research also show that consumers consider reviews with strong arguments to provide higher quality information compared to reviews with weak arguments.

### 1.4 The Result of Simple Linear Regression

A simple linear regression analysis technique was carried out to test hypothesis 4, namely testing the influence of perceived information quality on trust in reviews. The results of simple linear regression can be seen in table 4 below:

Table 4. Simple Linear Regression Result

Model		Unstandardized Coefficients		t	Sig.	Collienarity Statistics	
		B	Std.Error			Tolerance	VIF
1	(Constant)	0.247	0.841	0.294	0.769		

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collienarity Statistics	
	B	Std.Error				Tolerance	VIF
Perceived Information Quality	2.926	0.200	0.803	14.624	0.000	1.000	1.000

Dependent Variable: Trust in Review

Based on the simple linear regression results above, the regression equation can be formulated as follows:

$$\text{Trust in Review} = e + 0.803 x$$

A positive regression coefficient indicates a positive change in the independent variable's effect on the dependent variable. In this calculation, it shows that the independent variable has a positive coefficient. Based on these results, it can be concluded that for every increase in perceived information quality (X), trust in the review will increase with a regression coefficient of 0.803, assuming that other variables are constant.

According to the regression results in Table 4, it can be concluded that the significance level of the perceived information quality variable on trust in the review is 0.000, which is smaller than 0.05, indicating significance. Thus, it can be concluded that perceived information quality has a significant positive influence on trust in the review, and therefore, hypothesis 3 is accepted.

This study found several findings. First, this study found that reviews presented using rich modality produce higher perceived information quality compared to lean modality. This means that reviews that use a combination of text and video are considered to provide higher quality information than those that use a combination of text and images. Second, this study found that reviews with strong arguments were considered to be of higher quality than those with weak arguments. Third, this study found that perceived information quality has a positive effect on trust in reviews. This means that reviews will be more trusted if they provide high quality information so that it is useful in making a purchasing decision.

Based on the research findings, it is shown that halal cosmetics online reviews presented using rich modalities (audio-visual and text) result in differences in perceived information quality compared to those presented using lean modality (image and text). The Media Richness Theory is useful in determining the appropriate

media for communication. According to the Media Richness Theory, a media is classified as "rich or lean" based on its ability to convey knowledge and information<sup>39</sup>. Media modality is considered "rich" when it provides clear and unambiguous information<sup>40</sup>. Communication delivered with a rich modality, such as video featuring audio-visual elements, has the highest effectiveness in conveying messages<sup>41</sup>. Online reviews presented with rich modality (audio-visual) create a positive perception among customers<sup>42</sup>. Furthermore, video-based online reviews provide clearer and more comprehensive information, allowing consumers to see the product in three dimensions, providing a clearer view of product quality<sup>43</sup>. On the other hand, if only using images and text, product information is limited to a two-dimensional view<sup>44</sup>. Therefore, online reviews that utilize rich media modality are perceived to provide higher-quality information compared to lean modality (images). Consistent with this, other research findings show that rich media modality (audio-visual) leads to better perceptions and cognitive responses compared to using only images or audio media<sup>45</sup>. Online reviews presented using rich media modality (audio-visual) have a stronger influence on consumer trust<sup>46</sup>.

Argument quality refers to the completeness of information about a specific product<sup>47</sup>, the credibility of the information conveyed<sup>48</sup>, and messages that have

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<sup>39</sup> Ari Alamäki, Juho Pesonen, and Amir Dirin, 'Triggering Effects of Mobile Video Marketing in Nature Tourism: Media Richness Perspective', *Information Processing and Management* 56, no. 3 (2019): 756–70, <https://doi.org/10.1016/j.ipm.2019.01.003>.

<sup>40</sup> Hyokjin Kwak, 'Self-Disclosure in Online Media: An Active Audience Perspective', *International Journal of Advertising* 31, no. 3 (2012): 485–510, <https://doi.org/10.2501/IJA-31-3-485-510>.

<sup>41</sup> Feng Zhu and Xiaoquan Zhang, 'Impact of Online Consumer Reviews on Sales: The Moderating Role of Product and Consumer Characteristics', *Journal of Marketing* 74, no. 2 (2010): 133–48, <https://doi.org/10.1509/jmkg.74.2.133>.

<sup>42</sup> Marcin Lipowski and Ilona Bondos, 'The Influence of Perceived Media Richness of Marketing Channels on Online Channel Usage: Intergenerational Differences', *Baltic Journal of Management* 13, no. 2 (2018): 169–90, <https://doi.org/10.1108/BJM-04-2017-0127>.

<sup>43</sup> Anum Tariq et al., 'Online Impulse Buying of Organic Food: Moderating Role of Social Appeal and Media Richness', *Advances in Intelligent Systems and Computing* 1002 (2020): 586–99, [https://doi.org/10.1007/978-3-030-21255-1\\_45](https://doi.org/10.1007/978-3-030-21255-1_45).

<sup>44</sup> Alamäki, Pesonen, and Dirin, 'Triggering Effects of Mobile Video Marketing in Nature Tourism: Media Richness Perspective'.

<sup>45</sup> Chen and Chang, 'What Drives Purchase Intention on Airbnb? Perspectives of Consumer Reviews, Information Quality, and Media Richness'.

<sup>46</sup> Shalom Levy and Yaniv Gvili, 'How Credible Is E-Word of Mouth across Digital-Marketing Channels? The Roles of Social Capital, Information Richness, and Interactivity', *Journal of Advertising Research* 55, no. 1 (2015): 95–109, <https://doi.org/10.2501/JAR-55-1-095-109>.

<sup>47</sup> Xi Xu and Zhong Yao, 'Understanding the Role of Argument Quality in the Adoption of Online Reviews: An Empirical Study Integrating Value-Based Decision and Needs Theory', *Online Information Review* 39, no. 7 (2015): 885–902, <https://doi.org/10.1108/OIR-05-2015-0149>.

<sup>48</sup> Cheng Ming Chiang et al., 'Deploying Image Deblurring across Mobile Devices: A Perspective of Quality and Latency', *IEEE Computer Society Conference on Computer Vision and Pattern Recognition Workshops* 2020-June (2020): 2109–19, <https://doi.org/10.1109/CVPRW50498.2020.00259>.

claims and reasons for those claims<sup>49</sup>. Argument quality is divided into two categories: strong argument quality and weak argument quality<sup>50</sup>. The stronger an argument is, the greater the likelihood that the message will appear true, resulting in a positive perception<sup>51</sup> and making consumers perceive the review as having high-quality information. The honesty, relevance, and usefulness of the information embedded in the message are important factors in determining the usefulness of the arguments in the review<sup>52</sup> and the likelihood of consumer adoption of the review<sup>53</sup>. In line with the findings of<sup>54</sup> and<sup>55</sup>, reviews with more arguments contain more information, which helps readers make decisions about the product or service. Additionally, the arguments used in this study are presented in short sentences, making it easier for readers to process the information. Therefore, strong argument quality is perceived by consumers as having high-quality information, leading to consumer trust in the presented review.

## CONCLUSION

This study aims to examine the effects of different argument quality and presentation modalities in halal cosmetic online reviews on perceived information quality and trust in the review. Consistent with previous research conducted in physical stores, the results confirmed that online reviews presented with rich modalities (audio-visual and text) result in higher perceived information quality compared to lean modalities (images and text). Furthermore, online reviews presented with strong argument quality are perceived as providing higher-quality information by consumers compared to weak argument quality, and perceived information quality influences consumer trust in the review.

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<sup>49</sup> Sung Eun Kim et al., 'Effects of Tourism Information Quality in Social Media on Destination Image Formation: The Case of Sina Weibo', *Information and Management* 54, no. 6 (2017): 687-702, <https://doi.org/10.1016/j.im.2017.02.009>.

<sup>50</sup> Safdar Hussain et al., 'EWOM Source Credibility, Perceived Risk and Food Product Customer's Information Adoption', *Computers in Human Behavior* 66 (2017): 96-102, <https://doi.org/10.1016/j.chb.2016.09.034>; Chiang et al., 'Deploying Image Deblurring across Mobile Devices: A Perspective of Quality and Latency'.

<sup>51</sup> Yu Ting Chang, Hueiju Yu, and Hsi Peng Lu, 'Persuasive Messages, Popularity Cohesion, and Message Diffusion in Social Media Marketing', *Journal of Business Research* 68, no. 4 (2015): 777-82, <https://doi.org/10.1016/j.jbusres.2014.11.027>.

<sup>52</sup> Marc Julian Thomas, Bernd W. Wirtz, and Jan C. Weyerer, 'Determinants of Online Review Credibility and Its Impact on Consumers' Purchase Intention', *Journal of Electronic Commerce Research* 20, no. 1 (2019): 1-20.

<sup>53</sup> Xu and Yao, 'Understanding the Role of Argument Quality in the Adoption of Online Reviews: An Empirical Study Integrating Value-Based Decision and Needs Theory'.

<sup>54</sup> Robert M. Schindler and Barbara Bickart, 'Perceived Helpfulness of Online Consumer Reviews: The Role of Message Content and Style', *Journal of Consumer Behaviour* 11, no. 3 (2012): 234-43, <https://doi.org/10.1002/cb.1372>.

<sup>55</sup> Lotte M. Willemsen et al., "'Highly Recommended!' The Content Characteristics and Perceived Usefulness of Online Consumer Reviews", *Journal of Computer-Mediated Communication* 17, no. 1 (2011): 19-38, <https://doi.org/10.1111/j.1083-6101.2011.01551.x>.

This study offers guidance to marketers of halal cosmetics on enhancing sales and consumer interest in these products. In Islamic teachings, every Muslim is obligated to consume halal and tayyib (pure) products. Every consumed product must be halal, and tayyib, meeting holistic quality concepts including cleanliness, safety, healthiness, environmental friendliness, and containing permissible natural ingredients according to Allah's SWT permission. Indonesian Muslims may have a high demand for halal and environmentally friendly products due to these teachings. Although Muslim consumers are required to consume halal products, the consumption of non-halal cosmetic products remains popular among them. Therefore, to increase interest and sales of halal cosmetic products among Muslim consumers, marketers can provide rewards or incentive programs to motivate consumers to provide high-quality reviews with strong arguments and rich modalities. This can enhance consumer confidence in consuming halal cosmetics and increase the purchase of halal cosmetic products.

This study has several limitations. First, this research focuses on generation Z, whose age is 18-24 years. However, it might give different results if researched on other generational groups, namely baby boomers or millennials. Future research could use a research model like this but on different consumer groups (millennials or baby boomers) to find out how consumers respond to reviews presented using different media modalities and arguments. Second, this research focuses on cosmetic products and not luxury products or goods. It is possible that the findings would be different if the product context was different. Therefore, further research could examine different types of products, namely luxury goods, to determine how reviews are considered high-quality and how they influence consumer purchasing decisions.

## **DISCLOSURE**

### **Conflicts of Interest**

There is no conflict of interest regarding the publication of this paper

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## Authorship and Level of Contribution

The research paper was primarily authored by Afa Aviska, who was responsible for the original draft writing. The supervision, data curation, and critical review and editing of the paper were expertly handled by Fitriah Dwi Susilowati. The investigation phase, specifically data collection, was a collaborative effort undertaken by Lena Mardiana, Febrina Rahmatika, and Resy Nur Rohmah. Their collective contributions in gathering and analyzing data were integral to the depth and accuracy of the research findings.

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