

BEYOND FUNCTIONALITY: BUILDING VALUE TO ESSENTIAL OILS PRODUCTS AT INDONESIA DIGITAL MARKET FIELD

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ABSTRACT

Background: This study investigates the evolving online marketing skills in the digital marketplace, focusing on essential oil products. These products often face market uncertainty regarding product attribute value. Therefore, it is crucial to identify marketing strategies to drive future entrepreneurial success in the essential oil market.

Purpose: This research aims to identify how essential oil product sellers communicate their products to attract consumer interest and preferences in the online market.

Design/methodology/approach: The study utilizes digital research methods to elucidate the phenomenon of online markets. Using electronic data consisting of product information written by sellers, this research employs web scraping through Python algorithmic computational techniques for data collection. The digital data collected spans from 2020 to 2023, a period marked by the surge in online shopping activities. The data is analyzed using Text Network Analysis (TNA) to map emerging narrative networks.

Findings/Result: Essential oil product sellers not only emphasize the intrinsic value attributes of the products as the primary marketing narrative but also explore the social and symbolic values of the products as online marketing strategies to address uncertainties regarding product standardization and safety.

Conclusion: Sellers are concerned about the vulnerability of essential oil product values beyond merely campaigning for the product's benefits. Entities with the authority to provide safety labels play a crucial role in enhancing the product's reputation regarding its social value, such as safety.

Originality/value (State of the art): Online marketplaces play a crucial role as a new marketing channel for essential oil products. This is due to the increased accessibility of products to consumers and the growing need for advanced online marketing skills in the future.

Keywords: essential oil, online marketplace, marketing skills, value product, product reputation

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INTRODUCTION

Market demand for essential oil-based products has recently shown a significant upward trend. Based on data from the Ministry of Industry (2023), Indonesia's total production of essential oils reached 16,400 tons in 2022, with an export value of USD 172.9 million, and continues to increase annually. This condition is driven by the increasingly high market interest and demand for products made from essential oils nationally and globally (Alighieri et al. 2017; Yusdar, 2015; Faradiva, 2020; Huda et al. 2021). The COVID-19 pandemic is one of the factors causing the high demand for essential oil products, in addition to the benefits to consumer health, and it can be used easily by the community because it comes from organic plants (Purwitasari & Alamudi, 2023; Utami et al. 2022; Chang et al. 2022; Jugreet et al. 2020). In fact, due to the many benefits obtained, essential oils are increasingly widely used commercially in various industrial sectors, such as the modern cosmetic, pharmaceutical, and food industries (Schmidt, 2020; Sharmeen et al. 2021).

In this case, Indonesia has an excellent opportunity to not only be a provider of raw materials but also to produce a variety of end products made from essential oils with high competitiveness and bargaining power. This opportunity becomes even more significant if contextualized globally; Indonesia is one of the countries capable of producing 40 essential oils from 80 types marketed globally (Andila et al. 2020). However, despite the promising growth of the essential oil industry, market uncertainty remains a primary concern. One of the major issues contributing to this uncertainty is the proliferation of counterfeit essential oils and low product quality. This issue has sometimes become a multifaceted challenge for quality control (Capetti et al. 2021). This problem is particularly critical in essential oil products, where consumer safety and product quality are paramount (Manion & Widder, 2017; Shaaban, 2020; Maurya et al. 2021). Counterfeiting and low-quality products can severely disadvantage consumers, damage product reputations, and complicate efforts to maintain high-quality standards.

In this context, institutions catering to market demands face fierce competition, as consumers are increasingly sensitive to the value presented by manufacturers and sellers (Dimoka et al. 2012; Antonopoulou et al. 2014; Yang et al. 2019; Fauzi et al. 2023). Failure to effectively

convey product safety assurance information through online marketing will pose significant challenges in quality control within the essential oil industry. This will adversely affect consumer confidence and overall market stability, thereby presenting a substantial obstacle to quality control in the essential oil industry. Marketing expertise thus becomes crucial in addressing these online market challenges, especially in disseminating information to attract consumer interest and preferences in the online marketplace (Gay & Zhang, 2014). Effective online marketing strategies in this context can stimulate consumer interest in products or even foster loyalty, thereby enhancing customer relationship management and marketing performance (Akhmadi & Pratul, 2021; Piranda et al. 2022; Bostanshirin, 2014; Setiadi, 2023; Aryani & Tuti, 2023).

Kotler et al. (2015) argue that marketing creates a vibrant and interactive consumer community to make the brand a part of consumer ownership. This idea differs significantly from traditional marketing concepts that emphasize the core benefits of products or services to consumers without considering the aspect of continuous interaction (Bhayani & Vachhani, 2014). This perspective underscores that marketing is not merely about introducing products but building product value and aiming to deepen consumer attachment to product ownership (Armstrong et al. 2014). Comprehensively, "strategic marketing choices" become crucial as they can shape consumer preferences. This represents a new form of communication emerging in the digital and market realms, demanding comprehensive digital competencies where seller skills are critical for business activities conducted or planned (Coman et al. 2020; Ramli et al. 2023; Thumiki & Magd, 2023; Omar et al. 2020). Therefore, the success of sales in the online market is greatly influenced by the ability to read market situations, which concerns the seller's perception of consumer acceptance.

Then, it became a meaningful discussion about what kind of marketing skills have the potential for economic success, given that no standards can be applied in the online market. In this regard, descriptive features are crucial marketing tools, offering product information that consistently shapes buyer behavior (Choi & Mela, 2016; Bauer & Dorn, 2016; Immanuel & Peter, 2022; Hu et al. 2023). According to Beckert (2009), producers strive to develop product reputation and value by creating consumer attachment through

marketing investments. However, the issue of reputation and value is a challenging market theory, as many market institutions and agents can build and provide assessments to foster market reputation. In the art market, for instance, the value of artwork stems from an intersubjective evaluation process and the attribution of reputation by experts, which can also serve as a signal of quality (Beckert & Rössel, 2013). In this principle, instruments representing products in the online market become an effective strategy to gain market advantage by mitigating the uncertainty of products that consumers do not yet own.

Recent studies have extensively investigated the impact of market uncertainty on marketing strategies for essential oil-based products (Salsabila, 2023; Widiawanti, 2022; Aldin, 2020; Alighiri et al. 2018), providing comprehensive insights into sustainable product development. However, previous research has often relied on traditional approaches such as surveys and textual analysis, thus failing to offer a thorough discussion of the rapidly evolving online market phenomena. This study addresses this gap by delving into the digital marketplace, utilizing contemporary digital methods such as big data collection to explore how sellers leverage the ‘social power of products’ to influence consumer purchasing decisions for essential oil-based products, specifically examining how sellers utilize the ‘social power of products’ to influence

consumer purchasing decisions for essential oil-based products. Beckert (2019) explains that the process is not solely aimed at gaining trust in the product but also at attracting consumer interest to make purchases and serving as a solution to the issue of uncertainty.

METHODS

This research was conducted on the Bukalapak Marketplace, one of Indonesia’s largest e-commerce platforms. It was chosen to identify socio-economic phenomena within the digital market context. Bukalapak represents a significant arena for illustrating the evolving dynamics of digital society and market trends. Bukalapak’s selection is justified by its established commitment to enhancing the competitiveness of Micro, Small, and Medium Enterprises (MSMEs) (Supangat, 2021; Sugiarti et al. 2020). This aligns with the study’s focus, as MSMEs produce the essential oil-based products under analysis. The study encompasses a comprehensive analysis of all available data on Bukalapak from January 2020 to December 2023. During this period, online shopping surged in Indonesia, becoming a primary marketing channel extensively utilized by sellers of essential oil-based products. In Figure 1 the methodology steps are described.

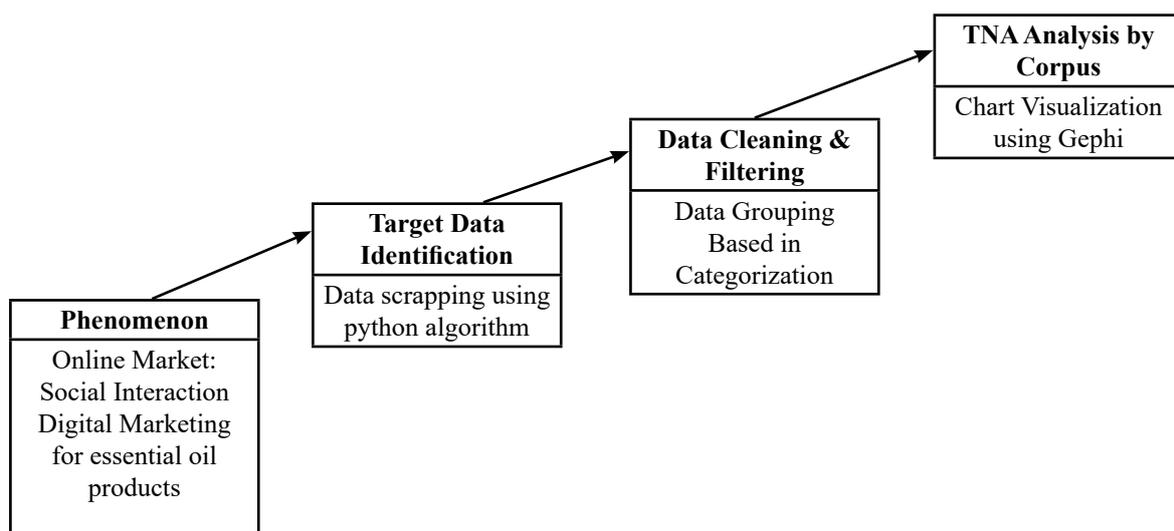


Figure 1. Methodology operationalization

This research utilizes digital data as the primary source to identify phenomena within online markets. In this context, digital data refers to a collection of online information that can elucidate aspects of digital society, providing valuable research material (Redshaw, 2020). The comprehensive analysis of such data offers insights into consumer behavior, market trends, and the dynamics of online interactions.

This study employed web scraping techniques implemented with Python algorithms to collect product descriptions used for consumer interactions. This method facilitated the comprehensive textual and numerical data extraction from the website (Mitchell, 2024). Following data filtration and extracting a specific text corpus, the data were categorized based on product description types. The categorization comprised two groups: sold products and unsold products. The analysis concentrated on successfully sold products, while the descriptions of unsold products were excluded. This approach allowed for a more pertinent discussion of the factors influencing product sales success. In this research, we consider that the products that were successfully sold explored more of the symbolic value of the achievements and standardization of the products.

The final step in this methodology involved conducting a word network analysis using Text Network Analysis (TNA), which identified narrative networks within the market domain (Segev, 2020; Carlewy, 2020). At this stage, the data were analyzed using modularity and centrality metrics using Gephi software, which facilitated the identification of the most frequently used word networks by highlighting the most significant nodes and the most robust networks in the edges related to the relationships each narrative built. Consequently, this research visualized the data and depicted the most frequently used narratives for marketing essential oil products in Bukalapak. These findings provide recommendations for more effective marketing strategies in future endeavors.

Digital research is used as the main method to collect data, analyze findings, and find answers to the research questions posed. Digital research methods are defined as contemporary research that uses online and digital technologies to collect social data and analyze the phenomena of the digital society that are happening or have happened (Mackenzie et al. 2015; Snee et al. 2016; Marres, 2017; Lupton, 2014; Den Besten

et al. 2010). In this case, digital research is not just a tool but an analytical framework for various socio-economic phenomena. In line with Rogers (2024), who popularized this method, digital research can answer various research questions by referring to “natively digital.” Therefore, digital research is more than just a data collection technique; it provides insight into the dynamics of digital society. A term that has gained popularity recently is “Digital Social Research” (Paoli & Masullo, 2022; Addeo & Masullo, 2021).

This research adopts the digital research approach Marres & Gerlitz (2016) developed, known as “interface methods.” This digital research method combines digital media, social science and technology (STS), and sociology methodologies. According to Marres & Gerlitz (2016), this interface method becomes a digital analysis method and visualizes the “issue dynamics” of various “shared events.” In line with the research, the development of digital markets and economic phenomena is growing in society. The implication is that community interaction has become more complex in an all-digital society. In line with the opinion of Rieder & Röhle (2012), this method will encourage our understanding of digital society or “digital humanities.” This methodology is expected to provide richer insights into the complex interactions between humans and technology in an ever-evolving online marketplace.

In our effort to understand the dynamics of the online market, we argue that the product reputation built to address the uncertainty regarding the value of essential oils does not rely solely on their functional value, as is commonly seen in conventional essential oil marketing. In our research, we seek to address this hypothesis by identifying the role of sellers in the marketing strategies employed to build the reputation and value of essential oil products. In addition, we propose that effective online marketing strategies for essential oils should also encompass building emotional connections and highlighting ethical sourcing practices, which are increasingly valued by discerning consumers in the digital marketplace.

This study is based on the evolving marketing phenomenon where markets have become entirely online. Essential oil products, which previously faced issues of uncertainty, now require sellers to adapt to increasingly competitive online marketing as the market becomes more sensitive to the product value.

In this context, selecting strategic marketing to build a reputation becomes crucial. In the online marketplace, marketing no longer merely communicates the basic value of the product, such as its function, but expands to more significant aspects like security and consumer acceptance. This framework is developed to identify how sellers communicate their products in the Bukalapak online marketplace (Figure 2).

RESULTS

Based on data scraping conducted on the Bukalapak platform for products made from essential oils, this study identified as many as 235 IDs available, with market sales quantity reaching 2,625 products. From the product categories found, products made from essential oils traded on the Bukalapak platform are dominated by health category products. Health category products for essential oils reached 184 products and sold 2,457 IDs. Beauty products occupy the second top, with a total of 20 IDs and sales of 132 products. The third top is interior accessories, as many found in the study are air freshener products, with 21 products found and 32

sold. Consumer interest in essential oil-based products in the health product category indicates a growing recognition of essential oils' benefits. Distribution of essential oil product sales by category in Figure 3.

Several recent studies have demonstrated the increased production of essential oils for health purposes due to their proven benefits in preventing and curing various diseases (Yunilawati et al. 2021). In fact, during the COVID-19 pandemic, essential oils became one of the most sought-after health products by the public as an alternative to overcoming the scarcity of pharmaceutical products (Alamsyah et al. 2021; Meilina et al. 2020). Despite the recognition of its functional value, it is imperative to scrutinize the marketing strategies used by sellers and understand the factors that influence consumer preferences for essential oil products. Factors such as product quality, price, packaging, and promotion play an important role in consumers' purchasing decisions. We will further explain this marketing strategy in the next subchapter by visualizing the findings of how the strategic narratives built by all sellers of essential oil products can be mapped and identified.

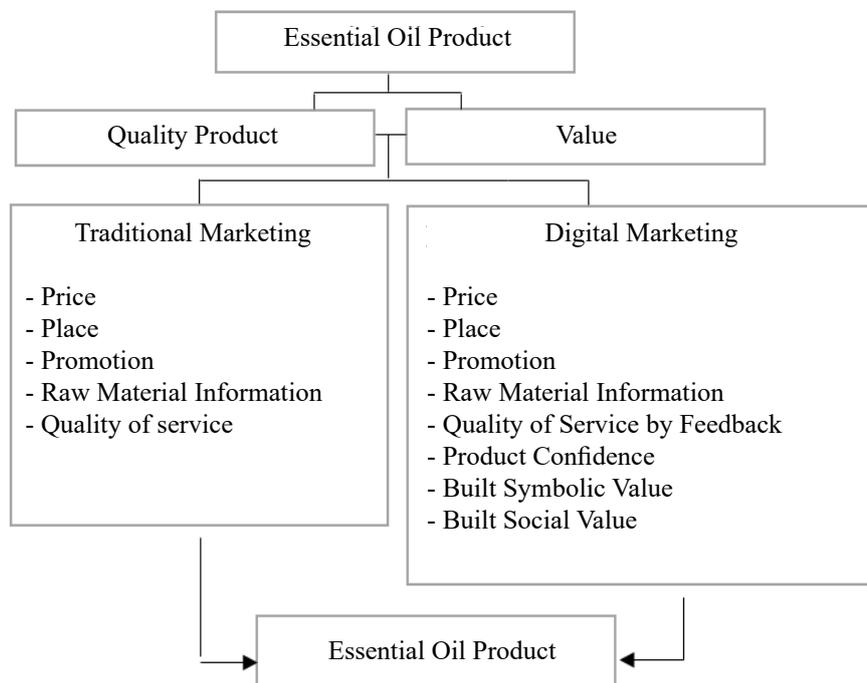


Figure 2. Research conceptual framework

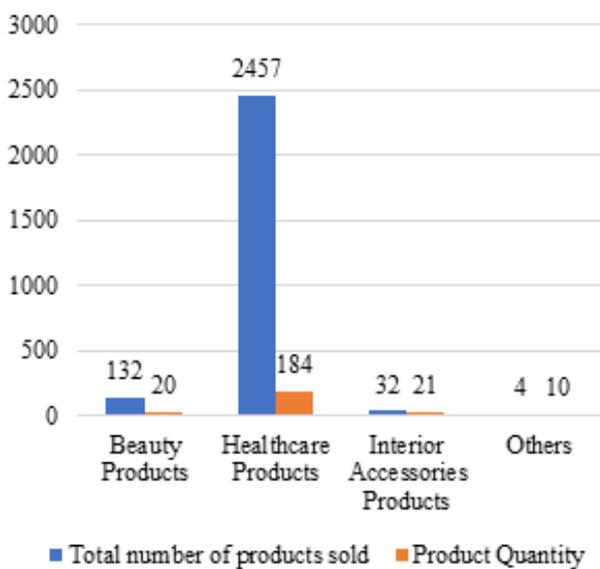


Figure 3. Distribution of essential oil product sales by category

Generating Second Power Reputation for Essential Oil Products

Building a strategic reputation for essential oil products through online marketing is a market activity that is no less important than product sales. This is because market reputation significantly influences consumer preferences when making purchases (Gómez-Rico et al. 2023). Success in building product reputation can also encourage products to achieve “goodness” values that can potentially improve sales performance (Aula & Mantere, 2020). Effective communication of product values enhances product reputation and plays a crucial role in meeting market demand. In this case, signaling high-quality products in the market can have implications for providing feedback on the seller’s honesty with the product (Li et al. 2020). This description also aligns with Beckert’s (2020) opinion, which explains the market from the “meaning model” that generates confidence in the credibility of the product quality narrative and creates market trust.

Essential oil marketing, emphasizing the value of its product attributes, is a strategy to overcome market uncertainty about the quality of products that consumers will receive. In this situation, market uncertainty in product information can lead to negative reputational judgments by consumers (Beckert, 2020; Beckert & Berghoff, 2013). Accordingly, the product narratives of “100% pure,” “aroma,” and the authenticity of “natural” raw materials are the main narratives used in online marketing to gain a positive reputation for

essential oil products (Figure 4). This is inseparable from natural products, often considered to contain chemicals (Sudewi et al. 2020; Cahyono et al. 2020). Building a reputation for the various values conveyed is a marketing strategy to counteract negative judgments from consumers, particularly in light of the widespread illegal use of chemical drugs in traditional medicine mixtures. Furthermore, the narrative leverages the strength of environmentally friendly products to cultivate a favorable reputation (Fatmawati & Amudi, 2023).

The issue of environmentally friendly products has recently gained significant attention, with consumers increasingly willing to pay a premium for these products (Tezer & Bodur, 2020; Li & Kallaz, 2021; Dong, 2022). For many businesses, it is crucial to understand that the symbolic value associated with natural raw materials is not merely additional information but has long-term implications for perceptions of comfort and product safety in the online market. By considering these values as market preferences, risks such as low demand and price decreases can be avoided (Beckert, 2020). Reflects a market shift that can be embraced in the digital marketplace, where the value of natural products can emerge as a prominent strength. It is undeniable that this will increasingly become a significant force as consumer attention towards environmental sustainability grows within the context of global economics and new market trends (Sriyono et al. 2021). Furthermore, the value of these natural products enables the transformation of pricing into more stable terms due to their significant value and increasing urgency. Thus, market uncertainties regarding essential oil prices can find resolution, although safety remains the foremost concern.

When viewed within the market context, “product safety” emerges as a marketing innovation that consumers can access. In this situation, marketers fortify their marketing innovation to address the ambiguity surrounding product quality information, rendering comprehensive product information a viable market solution (Beckert, 2021; Beckert & Bronk, 2019). To provide legitimacy to their products’ “safe” value, sellers assure consumers that essential oil products have passed a series of tests and received a distribution permit from the Food and Drug Administration (BPOM). As the state agency providing this legitimacy, BPOM is crucial in building a market reputation. In this case, state involvement influences market

In the findings of this research, the value of essential oil products highlighted by sellers primarily consists of attributes that need to be continuously elaborated with supporting evidence, such as certifications or other legal endorsements. In this regard, product quality assurance can serve as a guideline for sellers to present to consumers not only in written form but also through other features such as images, videos, or digital certificates that consumers can publicly access. This aims to further convince consumers of the narratives being built, such as “aroma,” “pure,” and “natural.” Authentic evidence that can be attached to the marketing of products by sellers in e-commerce has been shown in many findings to influence performance and reputation mechanisms, where consumers have increasingly strong confidence in natural products (Xue et al. 2023).

This information content becomes crucial in addressing the issue of uncertainty so that what Beckert (2020) calls product confidence that surpasses trust can be achieved. Ultimately, the online market ecosystem will not systematically face safety assurance constraints when purchasing products. Nevertheless, consideration of consumer ratings also becomes essential, as this role directly determines market acceptance since consumers can learn from others’ experiences about product quality beforehand. In this regard, positive and negative feedback will serve as quality signals for other potential buyers (Fileri et al. 2021; Karabas et al. 2021). As an initial step to resolve uncertainty issues in essential oil products, supplementing information with attached product certificates becomes a key factor. This step will help enhance consumer trust and provide assurance of product quality. Further research should elaborate on electronic word of mouth (e-WOM) to observe direct responses to uncertainty issues, considering that e-WOM significantly shapes consumer perceptions and confidence in products.

In addition, online marketing can also help create a safe and reassuring product image for consumers. Manufacturers can build consumer confidence in their essential oil products by providing clear information on quality, certification, and safe production processes. Even in an evolving market field, sellers gain “not only the trust of consumers but also product confidence” (Beckert, 2020). Thus, the digital market is a potential field for marketing essential oil-based products. The right marketing strategy could boost their sales and

market performance. Bronk and Beckert (2019) assert that a new ‘narrative economy’ is needed to shape the social constructions within market functions during uncertain market conditions. Market narratives are crucial in understanding the sociology of markets, particularly in online market competition using digital platforms.

Utilizing online marketplace platforms as a primary marketing channel has become an increasingly important strategy for sellers of essential oil products, given the various opportunities and significant growth in this sector. With the advent of online marketplace platforms, early entrepreneurs who previously had difficulty accessing the market can now more easily market their products. This opens up new opportunities for business growth and helps increase competitiveness and brand exposure for essential oil industry players. Therefore, utilizing online marketplace platforms promises significant benefits for businesses in the industry, allowing them to expand their market footprint and increase customer engagement efficiently and effectively.

Managerial Implication

The managerial implications of this research indicate that producers or sellers of essential oil-based products need to enhance product standards and quality control to meet heightened expectations for product safety and quality. Transparency plays a pivotal role, as providing verifiable information, such as certifications and digital certificates accessible to consumers, can effectively address market uncertainty. Consequently, essential oil-based products can be acknowledged for their functional benefits and robust reputation as high-quality and safe products. In the long run, this will be beneficial in encouraging the Downstream Industry of Essential Oils (IHMA) to expand and gain a wider market share globally.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

This research identifies marketing strategies for essential oil products that emphasize not only their functional value, benefits, and ingredients but also go beyond many findings that highlight essential oils

merely reinforcing their marketing in terms of their functional benefits while neglecting the social and symbolic values of products using natural ingredients and resources. This includes a marketing strategy aimed at gaining consumer trust in e-commerce. According to the findings, stakeholder involvement is essential in guaranteeing the safety of essential oils for consumption. Ultimately, effective marketing by exploring these values demonstrates that sellers of essential oil products are primarily concerned with addressing market uncertainty vulnerabilities in online platforms related to essential oils, rather than solely focusing on their functional value.

Recommendations

The online marketplace is a product marketing tool that offers convenience and wider opportunities for downstream essential oil products. Strengthening the skills of business actors needs attention when facing the dynamics of an increasingly growing e-commerce amid increasingly competitive market competition and challenges. Ensuring that early business actors in the downstream essential oil industry involved in the market get great opportunities and opportunities is a concentration that many parties must consider, especially the government, which is aggressively strengthening and integrating the upstream-downstream value chain of the IHMA sector to strengthen the economic value of rural people through industrial partnership programs. The online marketplace field must be considered and needs to be the main work that can be encouraged by the government to improve the quality of the downstream essential oil industry.

For future researchers, this study has limitations in parsing e-wom formed in the online marketplace, thereby hindering the identification of marketing effectiveness. Further exploration into this area would significantly propel the advancement of this industry. It is recommended to focus on developing more profound and holistic analytical methods for e-wom, as well as conducting comparative research across various platforms or types of online markets. Additionally, considering contextual factors that may influence e-wom and its impact on consumer behavior could also be a valuable direction for research. This approach promises more comprehensive findings and a meaningful contribution to understanding how e-wom shapes marketing effectiveness in online markets.

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REFERENCES

- Addeo F, Masullo G. 2021. Studying the digital society: digital methods between tradition and innovation in social research. *Italian Sociological Review* 11(4S): 153-153.
- Akhmadi H, Pratolo S. 2021. Online marketing of food products through marketplace platform: A study of community based online marketplace of bedukmutu. In *E3S Web of Conferences*. Vol. 232: 02015. EDP Sciences.
- Alamsyah Y, Arma U, Hidayati R. 2021. Obat Herbal Rebusan Daun Sirih (Piper betle Linn) Sebagai Obat Kumur Terhadap Kesehatan Rongga Mulut di Masa Pandemi Covid-19 (Scoping Review). *Menara Ilmu: Jurnal Penelitian dan Kajian Ilmiah* 15(2).
- Aldin K. 2020. The impact of social media on consumers' health behavior towards choosing herbal cosmetics. *Journal of Critical Reviews* 7(9). <https://doi.org/10.31838/jcr.07.09.214>
- Alighiri D, Eden W.T, Supardi K.I, Purwinarko A. 2017.

- Potential development of essential oil production of central java, Indonesia. *Journal of Physics: Conference Series* 824(1):012021. <https://doi.org/10.1088/1742-6596/824/1/012021>
- Alighiri D, Cahyono E, Eden W. T, Kusuma E, Supardi K. I. 2018. Study on the improvement of essential oil quality and its repellent activity of betel leaves oil (Piper betle l.) from Indonesia. *Oriental Journal of Chemistry* 34(6):2913. <https://doi.org/10.13005/ojc/340631>
- Andila P, Warseno T, Li'aini A, Tirta I. G, Wibawa I. P. A. H, Bangun T. M. 2020. Seri Koleksi Kebun Raya Eka Karya Bali Tanaman Berpotensi Penghasil Minyak Atsiri.
- Armstrong G, Adam S, Denize S, Kotler P. 2014. *Principles of marketing*. Pearson Australia.
- Antonopoulou K, Nandhakumar J, Panourgias N. 2014. Value proposition for digital technology innovations of uncertain market potential.
- Aryani D.R, Tuti M. 2023. Entrepreneurial orientation studies on food and beverage msme to examine the effects of social media marketing and digital content marketing activity on business performance. *Indonesian Journal of Business and Entrepreneurship (IJBE)* 9(3):513. <https://doi.org/10.17358/ijbe.9.3.513>
- Aula P, Mantere S. 2020. *Strategic reputation management: Towards a company of good*. Routledge. <https://doi.org/10.4324/9781003064558>
- Aziz A. 2020. Tugas dan wewenang badan pengawas obat dan makanan (bpom) dalam rangka perlindungan konsumen. *Al-Qanun: Jurnal Pemikiran dan Pembaharuan Hukum Islam* 23(1):193-214. <https://doi.org/10.15642/alqanun.2020.23.1.193-214>
- Bauer W, Dorn J. 2016. Requirements for product-service description at e-marketplaces in the manufacturing domain. *Procedia CIRP* 47: 406-411. <https://doi.org/10.1016/j.procir.2016.03.040>
- Beckert J. 2009. The social order of markets. *Theory and Society* 38:245-269. <https://doi.org/10.1007/s11186-008-9082-0>
- Beckert J. 2016. *Imagined Futures: Fictional Expectations and Capitalist Dynamics*. Harvard University Press. <https://doi.org/10.4159/9780674545878>
- Beckert J. 2021. The firm as an engine of imagination: Organizational prospecting and the making of economic futures. *Organization Theory* 2(2):26317877211005773. <https://doi.org/10.1177/26317877211005773>
- Beckert J. 2020. Markets from meaning: quality uncertainty and the intersubjective construction of value. *Cambridge Journal of Economics* 44(2):285-301.
- Beckert J, Rössel J. 2013. THE PRICE OF ART: Uncertainty and reputation in the art field. *European Societies* 15(2):178-195. <https://doi.org/10.1080/14616696.2013.767923>
- Beckert J, Berghoff H. 2013. Risk and uncertainty in financial markets: a symposium. *Socio-Economic Review* 11(3): 497-499.
- Beckert J, Bronk R. 2019. Uncertain futures: Imaginaries, narratives, and calculative technologies. Oxford Academic. <https://doi.org/10.1093/oso/9780198820802.001.0001>
- Beckert W, Siciliani P. 2022. Protecting sticky consumers in essential markets. *Review of Industrial Organization* 61(3):247-278.
- Bhayani S, Vachhani N. V. 2014. Internet marketing vs traditional marketing: a comparative analysis. *FIIB Business Review* 3(3): 53-63.
- Boegershausen J, Datta H, Borah A, Stephen, A. T. 2022. Fields of gold: Scraping web data for marketing insights. *Journal of Marketing* 86(5):1-20.
- Boltanski L, Esquerre A. 2016. L'énigmatique réalité des prix. *Sociologie* 1(7)
- Bostanshirin S. 2014. Online marketing: challenges and opportunities. In *Proceedings of SOCIOINT14-International Conference on Social Sciences and Humanities, Istanbul, September* (pp. 8-10).
- Cahyono I, Marsitningsih M, Widodo S. 2020. Peran badan pengawas obat dan makanan terhadap peredaran obat tradisional yang mengandung bahan kimia obat berbahaya dalam perlindungan konsumen. *Kosmik Hukum* 19(2):110-117
- Capetti F, Marengo A, Cagliero C, Liberto E, Bicchi C, Rubiolo P, Sgorbini B. 2021. Adulteration of essential oils: A multitask issue for quality control. Three case studies: Lavandula angustifolia Mill., Citrus limon (L.) Osbeck and Melaleuca alternifolia (Maiden & Betche) cheel. *Molecules* 26(18):5610.
- Carley, K. M. 2020. Network text analysis: The network position of concepts. In *Text analysis for the social sciences* (pp. 79-100). Routledge.
- Chang Y, Harmon PF, Treadwell DD, Carrillo D, Sarkhosh A, Brecht JK. 2022. Biocontrol potential of essential oils in organic horticulture systems: From farm to fork. *Frontiers in Nutrition* 8:805138.

- Choi H, Mela C. F. 2016. Online marketplace advertising. *Available at SSRN*.
- Chong AYL, Ch'ng E, Liu MJ, Li B. 2017. Predicting consumer product demands via Big Data: the roles of online promotional marketing and online reviews. *International Journal of Production Research* 55(17):5142-5156.
- Coman C, Popica MM, Rezeanu CI. 2020. The Adoption of Digital Marketing by SMEs Entrepreneurs. *Digital Science 2019*: 431-441.
- Den Besten M, Ackland R, Fry J, Schroeder R. 2010. Collaboration among e-research projects in the UK: an analysis using online research methods. *e-Research Collaboration: Theory, Techniques and Challenges*. 153-166.
- Dimoka A, Hong Y, Pavlou P. A. 2012. On product uncertainty in online markets: Theory and evidence. *MIS quarterly* 395-426.
- Dutta G, Kumar, R, Sindhwani, R, Singh, R. K. 2021. Digitalization priorities of quality control processes for SMEs: A conceptual study in perspective of Industry 4.0 adoption. *Journal of Intelligent Manufacturing* 32(6):1679-1698.
- Dong L. 2022. Analysis on influencing factors of consumer trust in e-commerce marketing of green agricultural products based on big data analysis. *Mathematical Problems in Engineering* 2022(1): 8221657.
- Faradiva A. 2020. *Analisis Daya Saing Ekspor Minyak Atsiri Indonesia* [Doctoral dissertation]. Universitas Hasanuddin.
- Fatmawati I, Amudi N. A. 2023. How do product positioning and consumer knowledge of green brands lead to purchase decisions?. *Indonesian Journal of Business and Entrepreneurship (IJBE)* 9(2): 306. <https://doi.org/10.17358/ijbe.9.2.306>
- Fauzi A, Hardjosoekarto S, Radhiatmoko R, Herwantoko O, Darwan D, Manik E. E, Romli Z. 2023. Digital-social construction of willingness to pay in online marketplace: Economic sociology of the digital functional food market in Indonesia. *International Sociology* 38(4):517-538.
- Filieri R, Raguseo E, Vitari C. 2021. Extremely negative ratings and online consumer review helpfulness: the moderating role of product quality signals. *Journal of Travel Research* 60(4):699-717.
- Gandhi A, Nurcahyo R, Gabriel DS. 2021. Identification of challenges and benefits of product certification on micro, small, and medium enterprises (MSMEs) in Indonesia. In *Proceedings of the 11th Annual International Conference on Industrial Engineering and Operations Management, Singapore* (pp. 499-509).
- Gay S, Zhang A. 2014. Expertise value added in the real estate market.
- Gómez-Rico M, Molina-Collado A, Santos-Vijande M. L, Molina-Collado M. V, Imhoff, B. 2023. The role of novel instruments of brand communication and brand image in building consumers' brand preference and intention to visit wineries. *Current Psychology* 42(15):12711-12727.
- Han S, Anderson CK. 2021. Web scraping for hospitality research: Overview, opportunities, and implications. *Cornell Hospitality Quarterly*, 62(1):89-104.
- Hu S, Wei MM, Cui S. 2023. The role of product and market information in an online marketplace. *Production and Operations Management* 32(10): 3100-3118.
- Huda FA, Meitasari D, Widyawati W. 2021. Analisis Daya Saing Ekspor Minyak Atsiri Nilam (Patchouli Essential Oil) Indonesia di Pasar Internasional dengan Negara Brazil, Amerika Serikat, Meksiko, dan Perancis Periode 2001-2018. *Jurnal Ekonomi Pertanian dan Agribisnis* 5(4):1069-1085.
- Immanuel DM, Peter Y. 2022. The Impact of Product Description of Involvement Platform Towards Purchase Intention at Online Stores on The Marketplace Platform. *Jurnal Aplikasi Manajemen* 20(4).
- Irshad M, Subhani MA, Ali S, Hussain A. 2020. Biological importance of essential oils. *Essential Oils-Oils of Nature 1*:37-40.
- Jugreet BS, Suroowan S, Rengasamy RK, Mahomoodally MF. 2020. Chemistry, bioactivities, mode of action and industrial applications of essential oils. *Trends in Food Science & Technology* 101:89-105.
- Karabas I, Kareklas I, Weber TJ, Muehling DD. 2021. The impact of review valence and awareness of deceptive practices on consumers' responses to online product ratings and reviews. *Journal of Marketing Communications* 27(7):685-715.
- Kattel RR, Regmi PP, Sharma MD, Thapa YB. 2020. Consumers' preference and willingness to pay for Nepalese large cardamom in the global market. *International Journal of Social Sciences and Management* 7(2):55-69.

- Kementerian Perindustrian. Ada Potensi Cuan Besar di Minyak Atsiri, Kemenperin Optimalkan Hilirisasi. Kementerian Perindustrian Republik Indonesia.
- Kholibrina CR, Aswandi A. 2020. The consumer preferences for new styrax based perfume products using a conjoint analysis approach. In *IOP Conference Series: Materials Science and Engineering* Vol. 935(1):012016). IOP Publishing.
- Kotler P, Burton S, Deans K, Brown L, Armstrong, G. 2015. *Marketing*. Pearson Higher Education AU.
- Li S, Kallas Z. 2021. Meta-analysis of consumers' willingness to pay for sustainable food products. *Appetite* 163:105239.
- Li L, Tadelis S, Zhou X. 2020. Buying reputation as a signal of quality: Evidence from an online marketplace. *The RAND Journal of Economics* 51(4):965-988.
- Lupton D. 2014. *Digital sociology*. Routledge.
- Mackenzie A, Mills R, Sharples S, Fuller, M, Goffey, A. 2015. Digital sociology in the field of devices. In *Routledge International Handbook of the Sociology of Art and Culture* (pp. 367-382). Routledge.
- Manion CR, Widder RM. 2017. Essentials of essential oils. *American Journal of Health-System Pharmacy* 74(9): e153-e162.
- Marres N. 2017. *Digital sociology: The reinvention of social research*. John Wiley & Sons. <https://doi.org/10.1111/1467-954X.12314>
- Marres N, Gerlitz C. 2016. Interface methods: Renegotiating relations between digital social research, STS and sociology. *The Sociological Review* 64(1):21-46.
- Maurya A, Prasad J, Das S, Dwivedy A. K. 2021. Essential oils and their application in food safety. *Frontiers in Sustainable Food Systems* 5:653420. <https://doi.org/10.3389/fsufs.2021.653420>
- Meilina R, Dewi R, Nadia P. 2020. Sosialisasi pemanfaatan tanaman obat keluarga (toga) untuk meningkatkan imun tubuh di masa pandemi covid-19. *Jurnal pengabdian kepada masyarakat bidang kesehatan* 2(2): 89-94. <https://doi.org/10.29303/jsit.v2i1.25>
- Mitchell R. 2024. *Web scraping with python*. O'Reilly Media, Inc.
- Nurchayani M, Salqaura SS. 2023. Analisis Kinerja Ekspor Minyak Atsiri Indonesia Di Pasar Internasional. *Agrijo: Jurnal Agribisnis Universitas Malikussaleh* 8(1): 51-57. <https://doi.org/10.29103/ag.v8i1.11771>
- Omar FI, Zan UMS, Hassan NA, Ibrahim I. 2020. Digital marketing: An influence towards business performance among entrepreneurs of small and medium enterprises. *International Journal of Academic Research in Business and Social Sciences* 10(9):126-141.
- Piranda DR, Sinaga DZ, Putri EE. 2022. Online marketing strategy in facebook marketplace as a digital marketing tool. *Journal of Humanities, Social Sciences and Business* 1(3):1-26
- Purwitasari N, Alamudi M. Y. 2023. Potensi Minyak Atsiri sebagai Antivirus Sars Cov2: Literature Review. *Jurnal Farmasetis* 12(2):163-170.
- Ramli AA, Abd RN, Mahat MH. 2022. Developing effective online marketing strategies for women entrepreneurs in Selangor. *International Journal of Social Science Research* 4(1):229-241.
- Redshaw T. 2020. What is digital society? Reflections on the aims and purpose of digital sociology. *Sociology* 54(2): 425-431. <https://doi.org/10.1177/0038038519880114>
- Rieder B, Röhle T. 2012. Digital methods: Five challenges. *Understanding digital humanities*. 67-84. https://doi.org/10.1057/9780230371934_4
- Rogers R. 2024. *Doing digital methods*. SAGE Publications Limited.
- Salsabila SA. 2023. The uncertainty of essential oil as a cosmetic product market: a market sociology perspective. *International Journal of Social Science and Business* 7(2):261-267. <https://doi.org/10.23887/ijssb.v7i2.53485>
- Schmidt E. 2020. Production of essential oils. In *Handbook of essential oils* (pp. 125-160). CRC Press.
- Segev E. 2020. Textual network analysis: Detecting prevailing themes and biases in international news and social media. *Sociology Compass* 14(4):e12779. <https://doi.org/10.1111/soc4.12779>
- Setiadi R. 2023. Social media marketing and customized customer relationship management: the implication for marketing performance of budget hotel industry. *Indonesian Journal of Business and Entrepreneurship (IJBE)* 9(3): 478. <https://doi.org/10.17358/ijbe.9.3.478>
- Sharmeen JB, Mahomoodally FM, Zengin G, Maggi F. 2021. Essential oils as natural sources of fragrance compounds for cosmetics and cosmeceuticals. *Molecules* 26(3):666. <https://doi.org/10.3390/molecules26030666>

- doi.org/10.3390/molecules26030666
- Snee H, Hine C, Morey Y, Roberts S, Watson H. 2016. Digital methods as mainstream methodology: An introduction. *Digital methods for social science: An interdisciplinary guide to research innovation* (pp. 1-11). London: Palgrave Macmillan UK. https://doi.org/10.1057/9781137453662_1
- Sudewi NKAPA, Budiarta INP, Ujjanti NMP. 2020. Perlindungan hukum badan pengawas obat dan makanan (bpom) terhadap peredaran produk jamu yang mengandung bahan kimia obat berbahaya. *Jurnal Analogi Hukum* 2(2):246-251. <https://doi.org/10.22225/ah.2.2.1928.246-251>
- Sriyono, Biduri S, Proyogi, B. 2021. Acceleration of performance recovery and competitiveness through non-banking financing in SMEs based on green economy: impact of Covid-19 pandemic. *Journal of Innovation and Entrepreneurship* 10(1):27. <https://doi.org/10.1186/s13731-021-00166-4>
- Tezer A, Bodur HO. 2020. The green consumption effect: How using green products improves consumption experience. *Journal of Consumer Research* 47(1):25-39. <https://doi.org/10.1093/jcr/ucz045>
- Thumiki VRR, Magd H. 2023. Impact of Digital Marketing Skills on Digital Marketing Performance of Entrepreneurs. *European Economic Letters (EEL)* 13(3):794-802.
- Utami NR, Rahayuningsih M, Alighiri D, Nugraha SB, Yuwono S, Arifin MS. 2022. Kekayaan jenis tanaman berpotensi atsiri di Desa Ngesrepbalong, Kabupaten Kendal. *Inovasi Kimia* (1):140-159. <https://doi.org/10.15294/ik.v1i1.65>
- Wang Q, Dai Y. 2013. The influence of online product presentation and seller reputation on the consumers' purchase intention across different involvement products.
- Widiaswanti E. 2022. Model konseptual dinamika pemasaran minyak atsiri indonesia menggunakan sistem dinamik. *Jurnal Aplikasi Ilmu Teknik Industri (JAPTI)* 3(1):35-44. <https://doi.org/10.32585/japti.v3i1.2191>
- Xue H, Jin S, Wu Q, Geng X. 2023. How does platform certification affect the marketing performance of sellers in food e-commerce? Interaction with reputation mechanisms. *China Agricultural Economic Review* 15(4):758-776. <https://doi.org/10.1108/CAER-07-2022-0146>
- Yang W, Zhou Q, Fang G, Chen, C. 2019. Adapting Market Uncertainty in Digital Innovation Based on Adaptive Capability Configurations. In *2019 Portland International Conference on Management of Engineering and Technology (PICMET)* (pp. 1-6). IEEE. <https://doi.org/10.23919/PICMET.2019.8893890>
- Yunilawati R, Rahmi D, Handayani W, Imawan, C. 2021. Minyak atsiri sebagai bahan antimikroba dalam pengawetan pangan. *Minyak Atsiri: Produksi dan Aplikasinya untuk Kesehatan*. 85-121.
- Yusdar M. 2015. *Pengembangan Minyak Atsiri Tumbuhan Indonesia Sebagai Potensi Peningkatan Nilai Ekonomi*. Bogor: IPB Pers.