

Sustainable Harmony: Implications of Climate Change on Ecoculture in the Context of the Halal Industry

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Abstract:

This study examines the implications of climate change on ecoculture within the context of the halal industry, with a focus on ecological sustainability and halal practices. The research employs a qualitative approach using a literature review model. It analyzes the impact of climate change on halal raw material production, the adoption of environmentally friendly practices, socio-economic challenges, shifts in consumer preferences, and relevant policies. The findings reveal that climate change affects the supply chain and sustainability of the halal industry, compelling producers to innovate through eco-friendly technologies and sustainable production methods. This study also highlights the interconnection between halal principles and ecological sustainability goals, as well as the potential for their integration to create more environmentally friendly halal business models. These findings underscore the importances of cross-sector collaboration to address challenges and maximize sustainability potential within the halal industry.

Keywords: *Halal Industry; Climate Change; Ecoculture; Harmony Sustainable*

Abstrak:

Penelitian ini mengkaji implikasi perubahan iklim terhadap ekobudaya dalam konteks industri halal dengan focus keberlanjutan ekologis dan praktik halal. Metode yang digunakan dalam kajian ini melalui pendekatan kualitatif dengan model sturi literatur. Penelitian ini menganalisis dampak

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perubahan iklim pada produksi bahan baku halal, adopsi praktik ramah lingkungan, tantangan sosial-ekonomi, perubahan preferensi konsumen, serta kebijakan terkait. Hasilnya menunjukkan bahwa perubahan iklim mempengaruhi rantai pasok dan keberlanjutan industri halal, memaksa produsen untuk berinovasi melalui teknologi ramah lingkungan dan metode produksi keberlanjutan. Penelitian ini juga menyoroti keterkaitan antara prinsip-prinsip halal dan tujuan keberlanjutan ekologis, serta peluang integrasi keduanya untuk menciptakan model bisnis halal yang lebih ramah lingkungan. Temuan ini menegaskan pentingnya kolaborasi lintas sektor untuk mengatasi tantangan dan memaksimalkan potensi keberlanjutan dalam industri halal.

Kata Kunci: *Industri Halal; Perubahan Iklim; Eko Budaya; Harmonisasi Berkelanjutan*

Pendahuluan

Climate change has become a significant global challenge, affecting various aspects of human life, including the environment, economy, and socio-cultural dimensions¹. This phenomenon triggers ecosystem instability, accelerates the degradation of natural resources, and exacerbates social inequalities in various parts of the world. However, the background discussion in this study does not yet draw upon concrete data—such as climate trends or documented vulnerabilities in the halal market—to illustrate the urgency and scale of the problem, thereby limiting its empirical grounding. In the context of sustainability, the impact of climate change is not only limited to

¹ Liam Saddington, "Geopolitical Imaginaries in Climate and Ocean Governance: Seychelles and the Blue Economy," *Geoforum* 139 (February 1, 2023): 103682, <https://doi.org/10.1016/J.GEOFORUM.2023.103682>; Jim Y. Jin and Shinji Kobayashi, "Equal Tax and Equal Compensation: A Fair and Efficient Way to Save Climate," *Research in Economics* 78, no. 3 (September 1, 2024): 100965, <https://doi.org/10.1016/J.RIE.2024.100965>; Leah M. Fusco et al., "Blueing Business as Usual in the Ocean: Blue Economies, Oil, and Climate Justice," *Political Geography* 98 (October 1, 2022): 102670, <https://doi.org/10.1016/J.POLGEO.2022.102670>.

conventional sectors, but also extends to more specific domains, such as ecoculture ².

Ecoculture is a combination of cultural practices and ecological sustainability that reflects the harmonious relationship between humans and the environment³. Climate change, which affects lifestyle, resource availability and community resilience, threatens the sustainability of these ecocultural values. Particularly in communities that are highly dependent on local resources, these changes can trigger conflicts between cultural preservation and adaptation to climate challenges⁴.

² Anom Sigit Suryawan, Shuji Hisano, and Joost Jongerden, "Negotiating Halal: The Role of Non-Religious Concerns in Shaping Halal Standards in Indonesia," *Journal of Rural Studies* 92 (May 1, 2022): 482–91, <https://doi.org/10.1016/J.JRURSTUD.2019.09.013>; Al-Ansi & Han, "Role of Halal-Friendly Destination Performances, Value, Satisfaction, and Trust in Generating Destination Image and Loyalty," *Journal of Destination Marketing and Management* 13 (December 2018): 51–60; Al-Ansi & Han, "Role of Halal-Friendly Destination Performances, Value, Satisfaction, and Trust in Generating Destination Image and Loyalty," *Journal of Destination Marketing and Management* 13 (December 2018): 51–60.

³ Susminingsih Husien, Agus Fakhрина, and Abdul Nasir bin Hj. Abdul Rani, "Culture-Led Development: Implementation of Heritage Based Management in Indonesia and Brunei Darussalam.," *Al-Ulum* 20, no. 1 (May 20, 2020): 1–23, <https://doi.org/10.30603/AU.V20I1.742>; Waston et al., "Culture, Religion, and Harmony: The Struggle for Roles in Diversity in Indonesia," *Revista de Gestão Social e Ambiental* 18, no. 3 (March 8, 2024): e05225, <https://doi.org/10.24857/RGSA.V18N3-099>; Nadia Sigi Prameswari et al., "The Motivation of Learning Art & Culture among Students in Indonesia," *Cogent Education* 7, no. 1 (January 1, 2020): 1809770, <https://doi.org/10.1080/2331186X.2020.1809770>.

⁴ Md Mahfujur Rahman and Mohd Shahril Ahmad Razimi, "Halal Biotechnology Product: Halal Supply Chain Compliance and Integrity Risk," *Innovation of Food Products in Halal Supply Chain Worldwide*, January 1, 2023, 195–204, <https://doi.org/10.1016/B978-0-323-91662-2.00016-8>; Erhan Boğan, "Halal Tourism: The Practices of Halal Hotels in Alanya, Turkey," *Journal of Tourism and Gastronomy Studies* 8, no. 1 (March 30, 2020): 29–42, <https://doi.org/10.21325/JOTAGS.2020.534>.

In the halal industry, the link between ecoculture and sustainability is becoming increasingly complex. As an industry rooted in the principles of fairness, cleanliness, and balance, the halal industry faces great challenges to remain relevant amidst the impacts of climate change. Adapting to these changes often requires innovations that not only maintain halal principles, but also strengthen environmental sustainability⁵.

The background problem that will be discussed in this research is how climate change affects ecoculture in the context of the halal industry⁶. The link between ecological sustainability and halal practices is still a research area that has not been fully explored. Given the importance of cultural aspects in shaping halal perceptions and practices, this study becomes increasingly relevant to understand the implications of climate change on ecocultural sustainability in the industry⁷.

Specifically, this research seeks to identify the impact of climate change on the underlying ecocultural values of the halal industry, including resource management, production patterns, and

⁵ Syayyidah M. Jannah and Hasan Al-Banna, "Halal Awareness and Halal Traceability: Muslim Consumers' and Entrepreneurs' Perspective," *Journal of Islamic Monetary Economics and Finance* 7, no. 2 (2021): 285-316, <https://doi.org/10.21098/JIMF.V7I2.1328>.

⁶ Yusaini Hisham Mohamed et al., "The Moderating Effect of Halal Traceability System on Halal Food Supply Chain Management and Halal Integrity Assurance Relationship," *The Journal of Contemporary Issues in Business and Government*, 2021, <https://doi.org/10.47750/CIBG.2021.27.02.519>; Irwandi Jaswir et al., "Buku Referensi Titik Kritis Halal Dan Substitusi Bahan Non-Halal" (Jakarta, December 10, 2020).

⁷ Sumaryadi Sumaryadi et al., "Smart Halal Destination Ecosystem: The Exploration of Halal Tourism Ecosystem Model," *Masyarakat Pariwisata Journal of Community Services in Tourism* 1, no. 1 (December 21, 2020): 29-48, <https://doi.org/10.34013/MP.V1I1.345>; N. Zainuddin et al., "The Effect of Halal Traceability System on Halal Supply Chain Performance," *International Journal of Supply Chain Management*, 2020.

distribution. In this case, adaptation to climate change involves not only technical aspects, but also deep cultural transformation to ensure the simultaneous sustainability of ecosystems and industries⁸.

This study is expected to make an important contribution in understanding the complex relationship between climate change, ecoculture, and the halal industry. By analysing the existing challenges and opportunities, this study aims to formulate adaptation strategies that are aligned with the principles of sustainability and cultural values that underlie halal practices in the era of climate change.

Methods

This research uses a qualitative approach with a literature study method. Data were collected through a systematic review of books, journals, scientific articles, and official documents relevant to the topics of climate change, ecoculture, and halal industry. The data analysis process is carried out descriptively with a thematic approach to identify patterns, relationships, and implications of existing findings. The results of the analysis are then synthesised to provide deep insights into the interrelationships between climate change, ecocultural values, and sustainability in the halal industry.

Result and Discussion

Climate change and its impacts on the environment have been the focus of scientific studies over the past few decades⁹. According to

⁸ Fuadi and Ramadhan Razali, "Industri Halal : Kontestasi Label Halal Pada Sektor Makanan Di Provinsi Aceh," *Jurnal Ekonomi Dan Manajemen Teknologi (EMT)* 7, no. 3 (2023): 819–27, <https://journal.lembagakita.org/index.php/emt/article/view/1456/1009>; Abdul Hafaz Ngah, Yuserri Zainuddin, and Ramayah Thurasamy, "Adoption of Halal Supply Chain among Malaysian Halal Manufacturers: An Exploratory Study," *Procedia - Social and Behavioral Sciences* 129 (May 15, 2014): 388–95, <https://doi.org/10.1016/J.SBSPRO.2014.03.692>.

⁹ Ramon Arthur Ferry Tumiwa et al., "Investigating Halal Food Supply Chain Management, Halal Certification and Traceability on SMEs Performance,"

the IPCC (Intergovernmental Panel on Climate Change) report, climate change affects the stability of ecosystems and the sustainability of natural resources on which many economic sectors depend, including industries based on culture and faith. The halal industry, which is based on the principles of cleanliness, justice and sustainability, is at the intersection of the need for climate adaptation and preservation of cultural values¹⁰.

Ecoculture, as a concept that integrates culture with environmental sustainability, is increasingly relevant in discussions on climate change adaptation¹¹. Previous studies have shown that communities that implement ecocultural values tend to have higher resilience to climate change. This is because culture-based approaches often include sustainable resource management strategies and practices that strengthen human relationships with the environment¹².

Uncertain Supply Chain Management 11, no. 4 (September 1, 2023): 1889–96, <https://doi.org/10.5267/J.USCM.2023.6.003>; Mohd Farid Shamsudin and Hajjah Zawiah Abdul Majid, "Technology and Traceability in Halal Logistics," *Halal Logistics and Supply Chain Management*, January 1, 2022, 78–88, <https://doi.org/10.4324/9781003223719-9>.

¹⁰ Muhamad Shirwan Abdullah Sani, Noor Faizul Hadry Nordin, and Amal A.M. Elgharbowy, "Halal Detection Technologies: Analytical Method Approaches, Validation and Verification, and Multivariate Data Analysis for Halal Authentication," in *Innovation of Food Products in Halal Supply Chain Worldwide* (Elsevier, 2023), 253–71, <https://doi.org/10.1016/B978-0-323-91662-2.00015-6>; Fuadi Fuadi et al., "IMPLEMENTATION OF HALAL VALUE CHAIN IN BLOCKCHAIN-BASED HALAL INDUSTRY IN ACEH PROVINCE," *International Journal of Economic, Business, Accounting, Agriculture Management and Sharia Administration (IJEBA)* 2, no. 5 (October 20, 2022): 793–802, <https://doi.org/10.54443/IJEBA.V2I5.413>.

¹¹ Sucipto Sucipto et al., "Traceability of Halal Control Point in Material, Production, and Serving to Support Halal Certification in Universitas Brawijaya Canteen," *Indonesian Journal of Halal Research* 3, no. 2 (August 31, 2021): 75–86, <https://doi.org/10.15575/IJHAR.V3I2.11401>.

¹² Uswatun Nafi'ah, S. Sulhaini, and L. E. H. Mulyono, "Analysis of Halal Supply Chain Management and Internal Halal Traceability System on the Halal Integrity of Tourism in Support of UMKM Products in Lombok,"

In the context of the halal industry, research on climate change impacts is relatively limited. Most studies focus on technical aspects, such as energy efficiency in production or waste management. However, the linkages between climate change and the underlying cultural values of the halal industry, such as ecoculture, are rarely highlighted. This study is important to fill the gap by analysing how climate change affects halal industry practices holistically¹³.

Research on sustainability in the halal industry shows that adaptation to climate change requires innovation in various sectors. For example, studies on sustainability-based halal certification note that the adaptation of environmentally friendly technologies and production processes can improve the competitiveness of the industry while meeting the demands of consumers who are increasingly aware of environmental issues. However, the adoption of these innovations often requires deep cultural change¹⁴.

Several studies have also highlighted the importance of community participation in developing a sustainable halal industry. This participatory approach includes involving local stakeholders in policy formulation, utilising traditional knowledge, and strengthening adaptive capacity. Strong and organised communities have a greater

International Journal of Multicultural and Multireligious Understanding, 2020, <https://doi.org/10.18415/IJMMU.V7I9.1871>.

¹³ Gemechis Fikadu, Shashi Kant, and Metasebia Adula, "Halal Entrepreneurialism Effect on Halal Food Industry Future in Ethiopia: Mediation Role of Risk Propensity and Self Efficacy," *Journal of Halal Science, Industry, and Business* 1, no. 1 (May 31, 2023): 15–25, <https://doi.org/10.31098/JHASIB.V1I1.1541>.

¹⁴ Zahro Ubay Dilla and Muhamad Said Fathurohman, "IMPLEMENTASI HALAL TRACEABILITY SUPPLY CHAIN DENGAN MODEL SUPPLY CHAIN OPERATION REFERENCE (SCOR) INDUSTRI MAKANAN HALAL," *Jurnal Ekonomi Syariah Teori Dan Terapan* 8, no. 5 (September 30, 2021): 617, <https://doi.org/10.20473/VOL8ISS20215PP617-629>.

chance of maintaining cultural values while facing the challenges of climate change¹⁵.

This literature review underscores the need for a multidisciplinary approach in understanding the implications of climate change on ecoculture in the halal industry. This study is not only relevant for academics, but also for practitioners and policy makers who seek to formulate effective and sustainable adaptation strategies. Further research is needed to bridge the gap between theory and practice in building sustainable harmony in the era of climate change.

A. Climate change affects ecoculture in the context of the halal industry

1. Influence on halal production

Climate change significantly affects the agriculture, fisheries and livestock sectors, which are the main sources of raw materials in the halal industry. Extreme weather disruptions, such as droughts, floods and changes in rainfall patterns, impact the availability of halal raw materials that comply with sharia standards. As a result, raw material prices rise and supply chains are disrupted, which can affect the stability of the global halal ecosystem.

Climate change has a significant impact on the sustainability of the halal industry, especially in the aspect of the availability of raw materials that comply with sharia standards. Extreme weather disruptions, such as droughts and floods, not only reduce production output in the agriculture, fisheries and livestock sectors, but also increase price volatility and complicate global supply chains. This

¹⁵ M. van der Spiegel et al., "Halal Assurance in Food Supply Chains: Verification of Halal Certificates Using Audits and Laboratory Analysis," *Trends in Food Science & Technology* 27, no. 2 (October 1, 2012): 109–19, <https://doi.org/10.1016/J.TIFS.2012.04.005>; Aam Slamet Rusydiana et al., "Halal Supply Chain: A Bibliometric Analysis," *Journal of Islamic Marketing* 14, no. 12 (November 24, 2023): 3009–32, <https://doi.org/10.1108/JIMA-01-2022-0009>.

creates a major challenge for halal industry players in maintaining production stability and meeting market demand. In this context, mitigation and adaptation strategies are needed, such as diversification of raw material sources, adoption of climate resilient technologies, and strengthening regional cooperation to ensure the availability of sustainable halal raw materials. This effort is important to maintain the stability of the global halal ecosystem which is increasingly vulnerable to environmental pressures¹⁶.

2. Implications for Green Practices

The halal industry is starting to face pressure to adopt sustainable practices to mitigate environmental impacts. In halal ecoculture, the principles of hygiene, sustainability and environmental responsibility are prioritised. Environmentally friendly technologies such as renewable energy and regenerative agriculture methods are solutions that are integrated into halal industry practices to comply with sharia ecological requirements.

The adoption of sustainable practices in the halal industry is a strategic step to address the challenges of climate change while maintaining the industry's relevance in the global market. The integration of environmentally friendly technologies, such as renewable energy and regenerative agriculture methods, reflects the application of sharia ecological principles that are not only oriented towards religious compliance, but also environmental sustainability. This practice shows that halal values can act as a universal guideline in creating a balance between economic, social and ecological interests. However, the implementation of this solution requires infrastructure support, progressive regulations, and cross-sector collaboration so that

¹⁶ Albert Tan, David Gligor, and Azizi Ngah, "Applying Blockchain for Halal Food Traceability," *International Journal of Logistics Research and Applications* 25, no. 6 (2020): 947–64, <https://doi.org/10.1080/13675567.2020.1825653>.

the halal industry can develop inclusively and make a real contribution to climate change mitigation efforts¹⁷.

3. Social and Economic Challenges

Climate change also affects the socio-economic aspects of halal ecoculture. Small producer communities, especially in developing countries, face major challenges in maintaining economic viability due to reduced crop yields and rising production costs. This has the potential to widen the economic gap between large and small producers in the halal supply chain.

The researchers' analysis shows that climate change directly exacerbates socio-economic inequalities in the halal ecoculture, especially among small producers in developing countries. High dependence on local resources that are vulnerable to climate disruptions, such as droughts, floods and changing weather patterns, exposes small producers to reduced crop yields and spikes in production costs. This not only threatens their economic sustainability, but also widens the gap with larger producers who have better access to adaptation technologies and financial resources. Without adequate interventions, such as government subsidies, access to environmentally friendly technologies, and training to improve adaptation capacity, this imbalance has the potential to widen, which could ultimately destabilise halal supply chains globally¹⁸.

4. Changes in Consumer Preferences

¹⁷ Zuhra Junaida Binti Ir Mohamad Husny Hamid and Mohd Iskandar bin Illyas Tan, "Traceability Technology in Halal Logistics and Supply Chain," *Halal Logistics and Supply Chain Management*, January 1, 2022, 67-77, <https://doi.org/10.4324/9781003223719-8>.

¹⁸ Ridhati Mardiyah et al., "Conceptual Framework on Halal Meat Traceability to Support Indonesian Halal Assurance System (HAS 23000) Using Blockchain Technology," *2021 9th International Conference on Cyber and IT Service Management, CITSM 2021*, 2021, <https://doi.org/10.1109/CITSM52892.2021.9588953>.

Consumers in the halal industry are increasingly concerned about the sustainability of the products they consume. This awareness is driving the demand for halal products that not only fulfil sharia standards but are also environmentally friendly. As a result, halal producers must adjust their marketing and production strategies to accommodate the preferences of consumers who are increasingly discerning about climate change issues.

According to the researcher's analysis, increasing consumer awareness of sustainability in halal products creates both pressure and opportunities for manufacturers to innovate. Manufacturers need to integrate sustainability values into their business strategies, whether in the selection of raw materials, production processes, or product packaging, to meet the expectations of consumers who are increasingly critical of environmental impacts. This phenomenon shows a paradigm shift in the halal industry, where sharia values are no longer sufficient as the only standard, but must be juxtaposed with the principles of ecological sustainability. This adjustment not only serves to increase competitiveness in the global market, but also strengthens the role of the halal industry as a pioneer in supporting sustainable development goals. This confirms that sustainability is now an integral element in halal practices, while opening up opportunities to build more environmentally responsible business models¹⁹.

5. Policy and Regulatory Implications

Climate change is driving governments and halal certification bodies to develop stricter regulations related to sustainability. Halal standards not only focus on the process and content of the product, but also consider its impact on the environment. This policy creates opportunities for the halal industry to innovate while strengthening their position in an increasingly competitive global market.

¹⁹ Norasekin Ab Rashid and Jamil Bojei, "HALAL FOOD SUPPLY CHAIN INTEGRITY: THE INFLUENCE OF HALAL TRACEABILITY SYSTEM ADOPTION AND ENVIRONMENTAL FACTORS IN MALAYSIA," 2018.

The researcher's analysis shows that climate change has become a catalyst for governments and halal certification bodies to expand the definition of halal standards to include aspects of environmental sustainability. This reflects a paradigm shift in the halal industry, where sustainability is no longer just a value-add, but an integral part of shariah compliance. These stricter regulations not only aim to reduce environmental impact, but also encourage innovation in the halal industry, such as the application of green technology and more efficient resource management. In the context of the global market, this step provides a strategic opportunity for the halal industry to improve competitiveness while meeting the demands of consumers who are increasingly concerned about sustainability. Thus, sustainability policies in the halal industry are not only religiously relevant, but also an adaptive approach that allows the industry to survive and thrive amidst the challenges of climate change²⁰.

B. Linkages between Ecological Sustainability and Halal Practices

This study found that there is a significant relationship between halal practices and ecological sustainability. The analysis shows that halal principles, which prioritise cleanliness, fairness and balance, are closely linked to ecological sustainability goals such as waste reduction, environmental protection and well-being of living beings. For example, halal slaughter processes that follow ethical standards not only minimise animal suffering, but also ensure the quality of the surrounding environment is maintained through responsible waste management. This shows that the values in halal

²⁰ Siti Khadijah et al., "Contemporary Issues and Development in the Global Halal Industry Selected Papers from the International Halal Conference 2014" (Malaysia, 2014), <https://doi.org/DOI.10.1007/978-981-10-1452-9>.

practices can be applied as a holistic approach to achieve sustainability goals²¹.

Furthermore, this research reveals that some industry sectors are starting to integrate halal practices with green initiatives. For example, halal food manufacturers have started using sustainably sourced raw materials, such as meat from organic farms and environmentally friendly non-animal ingredients. In addition, many halal product packaging now uses biodegradable materials to reduce negative impacts on the environment. However, this implementation is still limited to a few large companies, while small and medium enterprises (SMEs) face obstacles such as high costs and lack of awareness of the importance of ecological sustainability in the halal context²².

These results show that there is great potential to develop halal-based business models that are more environmentally friendly. However, there is a need for further research to systematically align halal and ecological sustainability policies. The discussion also emphasised the importance of collaboration between stakeholders, such as halal authorities, environmental regulators and the scientific community, to create standards that integrate both aspects. With the right approach, halal practices can not only be a symbol of religious observance, but also a means to support global efforts to preserve the environment²³.

²¹ Norasekin Ab Rashid and Jamil Bojei, "The Relationship between Halal Traceability System Adoption and Environmental Factors on Halal Food Supply Chain Integrity in Malaysia," *Journal of Islamic Marketing* 11, no. 1 (January 14, 2019): 117-42, <https://doi.org/10.1108/JIMA-01-2018-0016>.

²² Mohamed Battour and Mohd Nazari Ismail, "Halal Tourism: Concepts, Practises, Challenges and Future," *Tourism Management Perspectives* 19 (July 1, 2016): 150-54, <https://doi.org/10.1016/J.TMP.2015.12.008>.

²³ Rosana Eri Puspita et al., "Social Media and Halal Industry in Indonesia," *E3S Web of Conferences* 448 (November 17, 2023): 02016, <https://doi.org/10.1051/E3SCONF/202344802016>; Ramadhan Razali, "Akselerasi Daya Beli Masyarakat Terhadap Produk Halal Melalui E-

Conclusion

Climate change is having a significant impact on the eco-culture in the halal industry, affecting production, sustainable practices and consumer preferences. Environmental disruptions such as droughts and floods threaten the availability of halal raw materials, increasing production costs and disrupting global supply chains. In addition, pressure to adopt green technologies is driving the halal industry to be more sustainable, although socio-economic challenges, particularly for small producers, remain a major obstacle. Increasingly sustainability-conscious consumer preferences are also forcing producers to develop new strategies that are in line with sharia principles and ecological sustainability.

The results confirm that halal principles are closely linked to ecological sustainability objectives, such as waste management and environmental protection. Although there have been initiatives to use sustainable raw materials and environmentally friendly packaging, implementation is still limited, especially in the SME sector. Therefore, collaboration between halal regulators, government, and the scientific community is needed to develop integrated policies that support sustainability in the halal industry. With a systematic approach, halal practices can serve not only as a religious expression, but also as a strategic effort in preserving the global ecosystem.

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Commerce Di Provinsi Aceh," *Jurnal Iqtisaduna* 7, no. 2 (October 13, 2021): 115-26, <https://doi.org/10.24252/IQTISADUNA.V7I2.24080>; Ramadhan Razali, "E-Marketing and Halal Product Assurance," *Jurisprudensi: Jurnal Ilmu Syariah, Perundangan-Undangan Dan Ekonomi Islam* 14, no. 2 (2022): 116-28; Ramadhan Razali, "Industri Halal Di Aceh: Strategi Dan Perkembangan," *Jurnal Al-Qardh* 6, no. 1 (2021): 17-29.

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