

Conference Paper

Legality of Tobacco and the Impact of Digitalization on Regulation and Consumption in the Modern Era

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ABSTRACT

This study examines the legality of tobacco and how digitalization can affect the regulation and consumption of tobacco in the modern age. The tobacco industry is a significant sector in the global economy but also has adverse effects on public health. In various countries, tobacco regulations have been implemented to limit its consumption and distribution. However, with the rise of digital technology, the role of the internet and social media has facilitated access to information and online marketing of tobacco products. This presents new challenges in monitoring and enforcing tobacco-related laws. This research utilizes a qualitative method with a literature review approach and interviews with legal and public health experts. Data were gathered from various legal literature, government regulations, and analyses of digital content related to the sale and marketing of tobacco. The findings show that digitalization has the potential to undermine existing regulatory efforts, particularly concerning the sale of tobacco products to minors and covert advertising on social media. The study recommends adjusting legal regulations at both national and international levels to accommodate changes driven by digitalization, as well as developing technologies to enhance online tobacco sales surveillance.

Keywords: Tobacco legality, digitalization, tobacco regulation

Introduction

Tobacco has long been a vital commodity in the global economy, particularly in developing countries where it serves as a significant source of revenue and employment (Lencucha et al., 2022). However, despite its economic benefits, tobacco consumption, especially in the form of cigarettes, poses serious public health risks. Extensive research has shown that smoking is linked to various health issues such as lung cancer, heart disease, and respiratory disorders (Ramadhani et al., 2023). As a result, governments around the world have implemented regulations to curb tobacco use and reduce its harmful impact on public health (Sančanin & Penjišević, 2024).

On an international level, frameworks like the Framework Convention on Tobacco Control (FCTC), spearheaded by the World Health Organization (WHO), aim to strengthen control over the promotion, distribution, and consumption of tobacco products. These regulations are designed to lower smoking rates and mitigate the negative effects of tobacco use, particularly among younger generations (Mittal, 2019). High taxation, advertising bans, and smoking restrictions in public spaces are some of the widely adopted measures to address these concerns.

However, in the modern age driven by digitalization, these regulations face new challenges. Digitalization, especially through the Internet and social media, has created new avenues for

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tobacco distribution and marketing (Bahl et al., 2023). Online platforms, including influencer marketing and covert advertising on social media, make it harder for traditional regulations to effectively monitor and control tobacco promotion. Additionally, the rise of e-commerce enables easier access to tobacco products, including electronic cigarettes or vapes, which are increasingly popular among younger consumers (Wang et al., 2018). This raises significant concerns about the enforcement of laws restricting the sale and advertising of tobacco products.

At the same time, digitalization offers new opportunities for governments and non-governmental organizations to combat tobacco consumption (Simion & Popa, 2024). Digital technology is used to spread information about the dangers of tobacco and the benefits of quitting smoking, reaching broader audiences through online health campaigns. Digital tools such as mobile apps and health-related software have also been developed to help smokers reduce or quit smoking. Despite these advancements, existing regulations often lag in addressing the emerging challenges posed by new forms of tobacco advertising and online sales.

In this context, the present study seeks to examine the legality of tobacco and the impact of digitalization on tobacco regulation and consumption in the modern era (Viegas et al., 2022). This research explores how the internet and social media have facilitated access to information and the marketing of tobacco products, challenging current regulatory frameworks. Additionally, the study focuses on the effects of digitalization on law enforcement efforts to limit youth access to tobacco products and monitor covert tobacco advertising. Using a qualitative approach, this research combines a literature review, interviews with legal and public health experts, and an analysis of digital content related to tobacco sales and marketing.

The findings of this study indicate that digitalization has the potential to weaken existing regulatory efforts, particularly concerning the sale of tobacco products to minors and covert advertising on digital platforms. Therefore, adjustments to legal frameworks at both national and international levels are necessary to accommodate changes driven by digitalization. Moreover, this research recommends the development of technology to enhance the surveillance of online tobacco sales and prevent non-compliant digital marketing practices.

Research Relevance This study is highly relevant in today's global context, where digitalization has transformed many aspects of life, including tobacco regulation and consumption. The challenges of adapting tobacco policies and regulations in the digital era are increasingly evident, particularly in protecting vulnerable groups such as minors. Digitalization not only facilitates access to tobacco products but also introduces new forms of marketing that are harder to detect and regulate.

Thus, this research aims to provide deeper insights into how digitalization impacts tobacco regulation and consumption, offering policy recommendations to assist governments and international organizations in updating existing regulations. The study can also serve as a valuable reference for policymakers in designing strategies to strengthen law enforcement in the digital age and mitigate the negative health effects of tobacco consumption.

Material and Methods

This chapter outlines the methodology utilized in the research on the legality of tobacco and the impact of digitalization on regulation and consumption, particularly regarding the sale of tobacco through online stores. The research was conducted in Bojonegoro Regency and involved the participation of the Sumber Rejeki Farmers Group (Gapoktan), which is engaged in local tobacco production. A qualitative approach was adopted to explore how digitalization influences tobacco regulation, especially through e-commerce, and how such regulations affect tobacco producers.

Research design

This study employs a descriptive qualitative design to deeply investigate the impact of digitalization on the legality of tobacco sales, particularly among local producers marketing their

products through online platforms. The aim is to answer questions about how existing regulations are adapting to the challenges presented by online sales and the effects on agricultural producers, such as members of Gapoktan Sumber Rejeki.

The research design also explores the legality of online tobacco sales and the challenges faced by tobacco farmers in expanding their markets through digital channels. Digitalization allows local producers to reach a broader consumer base, yet simultaneously, regulations concerning online tobacco sales often become difficult to enforce, especially regarding age restrictions for buyers and violations of advertising laws.

Data sources

The research is conducted in Bojonegoro Regency, East Java, focusing on rice fields managed by the Gabungan Kelompok Tani (Gapoktan), or farmer groups, in the area. Bojonegoro was chosen as the research location because of its strategic role in rice production and its active agricultural community, which has been increasingly engaging with both traditional and modern farming practices. The region is well-known for its robust agricultural productivity and its capacity to serve as a representative case for studying the intersection of rice production and digital marketing.

Secondary data is gathered through a literature review that includes laws and regulations concerning online tobacco sales in Indonesia, as well as previous studies examining the impact of e-commerce on tobacco consumption. Additionally, secondary data encompasses digital content analysis, particularly from online platforms utilized by tobacco producers for marketing their products.

Data collection techniques

Literature Review, the researcher collected and reviewed various government regulations governing online tobacco sales, including policies related to cross-regional sales and monitoring underage purchases of tobacco. The literature review also explored the role of digitalization in changing tobacco distribution patterns and examined studies regarding online stores used by tobacco producers.

In-depth Interviews, Interviews were conducted with members of Gapoktan Sumber Rejeki to understand how digitalization has altered their marketing strategies for tobacco products and the regulatory challenges they encounter. Interviews with legal experts provided insights into how existing regulations can be adjusted to meet the realities of online tobacco sales. Interview Process like Fig 1.



Figure 1. Interview process and collecting data

Data analysis techniques

Data were analyzed using thematic analysis, allowing for the identification of key themes related to digitalization and the legality of tobacco sales. The analysis process includes several steps.

Data Organization

Data from interviews and literature reviews were organized based on key themes, such as "the role of online stores in tobacco distribution," "regulatory challenges in the digital era," and "monitoring cross-border tobacco sales."

Coding and theme development

The data were coded to identify patterns associated with the impact of digitalization on tobacco sales, particularly from the perspective of local producers like Gapoktan Sumber Rejeki. The emerging themes from this analysis were then used to address the research questions.

Interpretation

The data were further analyzed to provide in-depth insights into the challenges faced in enforcing tobacco regulations online and how these regulations can be adapted to support local tobacco producers while safeguarding consumers from health risks.

Validity and reliability

To ensure validity and reliability, the study utilized source triangulation, comparing data obtained from interviews with findings from the literature review. Furthermore, participant validation was conducted by confirming interview results with respondents to ensure that the data collected accurately reflects their real experiences.

Research ethics

In conducting this research, the investigator adhered to ethical research procedures by obtaining written consent from participants prior to interviews. The privacy and confidentiality of participant data were rigorously protected, and all information was used exclusively for the purposes of this study.

Contextual relevance

This study's focus on the legal framework surrounding tobacco in the context of increasing digitalization through online stores is particularly relevant given the rapid growth of e-commerce and its implications for tobacco consumption. By exploring the experiences of Gapoktan Sumber Rejeki in Bojonegoro, this research aims to provide insights into how digital platforms can both enhance market reach for local tobacco producers and complicate regulatory efforts designed to protect public health. The interplay between local agricultural practices and the global tobacco market underscores the necessity for adaptive legal frameworks that can effectively respond to the dynamic landscape of digital commerce. This will not only help in safeguarding public health but also in ensuring that local producers can compete in an increasingly digital marketplace.

Through the methodologies outlined above, this study is expected to contribute valuable insights into the legality of tobacco and the impact of digitalization on regulation and consumption, specifically within the context of online marketing by local producers such as Gapoktan Sumber Rejeki in Bojonegoro. The findings will help inform future policy recommendations aimed at enhancing regulatory frameworks while promoting fair competition and protecting vulnerable consumer populations.

Results and Discussion

This chapter presents the findings of the research regarding the legality of tobacco and the impact of digitalization on its regulation and consumption. The results are based on qualitative data gathered from interviews with members of the Sumber Rejeki Farmers Group (Gapoktan) in Bojonegoro and legal experts, as well as a comprehensive literature review. The discussion will explore key themes that emerged from the data, focusing on the implications of digitalization on tobacco regulation and the challenges faced by local producers.

Overview of Tobacco Legislation

The legality of tobacco sales in Indonesia is governed by a series of regulations aimed at controlling its distribution and consumption. The Tobacco Control Act (Undang-Undang No. 36 Tahun 2009) is the primary legal framework that outlines restrictions on advertising, promotion, and sponsorship of tobacco products. Furthermore, local regulations often impose additional restrictions, such as age limits for purchases and designated smoking areas.

In recent years, the advent of digital technology has significantly altered the landscape of tobacco sales. While existing regulations provide a foundation for controlling tobacco distribution, the emergence of online marketplaces presents unique challenges that complicate enforcement. Legal experts interviewed in this study emphasized the difficulty in regulating online tobacco sales, especially when it comes to monitoring compliance with age restrictions and preventing covert advertising on social media platforms.

Overview of Tobacco Legislation

The findings indicate that digitalization has profoundly impacted the way tobacco products are marketed and sold. Many local tobacco producers, particularly those in Gapoktan Sumber Rejeki, have embraced online platforms to expand their market reach. The establishment of online stores allows these producers to connect directly with consumers, thereby bypassing traditional distribution channels that often involve intermediaries.

Advantages of online sales

Increased Market Access, Online sales provide local producers with access to a broader consumer base, allowing them to reach customers beyond their immediate geographical area. This is particularly beneficial for small-scale farmers who may struggle to compete with larger tobacco companies. The ability to market their products through e-commerce platforms enables them to establish a more significant presence in the market.

Cost-Effective Marketing, Digital platforms allow for cost-effective marketing strategies that can target specific demographics. Producers can utilize social media advertising and search engine optimization to reach potential customers directly. This targeted approach helps in effectively promoting their products without the substantial costs associated with traditional advertising methods.

Enhanced Consumer Engagement, Online platforms facilitate direct interaction between producers and consumers, enabling them to build relationships and receive immediate feedback. This engagement can help producers adapt their offerings based on consumer preferences, thus enhancing customer satisfaction and loyalty.

Challenges of online sales

Despite the advantages, the transition to online sales presents several challenges, particularly concerning legality and regulation. Compliance with Age Restrictions, one of the significant concerns raised during interviews was the difficulty in ensuring compliance with age restrictions for tobacco purchases. While physical stores can implement age verification measures, online platforms may struggle to enforce these regulations effectively. Legal experts highlighted that

minors often have easy access to online tobacco sales, undermining efforts to protect young consumers. Online sales marketplace like Fig 2.

Covert Advertising and Promotion, the digital landscape allows for innovative marketing techniques that can circumvent traditional advertising restrictions. Producers may inadvertently engage in covert advertising on social media, where promotional content may not be explicitly labeled as advertisements. This poses a challenge for regulatory bodies tasked with monitoring compliance with tobacco advertising laws.

Lack of Regulatory Clarity, many producers expressed uncertainty regarding the legal framework governing online tobacco sales. The rapid evolution of digital platforms has outpaced the development of corresponding regulations, leading to confusion among producers about what is permissible. This lack of clarity can deter local farmers from fully engaging in online sales due to fear of potential legal repercussions.



Figure 2. Tobacco marketplace from Sumberrejekei

The role of Gapoktan Sumber Rejeki

The involvement of Gapoktan Sumber Rejeki in the research highlights the critical role that local farmers play in the tobacco industry. The group comprises small-scale farmers who cultivate tobacco and are directly affected by the changes in market dynamics brought about by digitalization.

Case studies of successful online marketing

Several members of Gapoktan Sumber Rejeki successfully established online stores, showcasing how digitalization can empower local producers. These case studies illustrate various strategies employed by farmers to enhance their market presence. Utilizing Social Media Platforms, some farmers created dedicated social media pages to showcase their products, share cultivation stories, and engage with customers. By leveraging visually appealing content and storytelling, they built a loyal following and attracted new customers interested in locally sourced tobacco.

Collaborative Marketing Efforts, Members of Gapoktan often collaborated to create joint online platforms that promote a collective brand of locally produced tobacco. This strategy not only reduces marketing costs but also strengthens the perception of their products as a premium offering. By emphasizing quality and local heritage, they can differentiate themselves from mass-produced alternatives.

Recommendations for Gapoktan

To fully leverage the opportunities presented by digitalization, the following recommendations are proposed for Gapoktan Sumber Rejeki. Training and Capacity Building, Providing training programs for farmers on digital marketing and e-commerce can empower them

to utilize online platforms effectively. Workshops focusing on age verification methods and responsible marketing practices can help ensure compliance with existing regulations.

Collaboration with Legal Experts, Establishing partnerships with legal experts can provide farmers with guidance on navigating the complexities of tobacco regulations. Access to legal counsel can help them understand their rights and responsibilities in the digital marketplace, minimizing legal risks.

Advocacy for Regulatory Adjustments, Gapoktan can advocate for clearer and more adaptable regulations regarding online tobacco sales. Engaging with policymakers to address the unique challenges posed by digitalization can help create a more conducive environment for local producers while maintaining public health protections.

Implications for public health

The findings of this study underscore the need for a balanced approach to tobacco regulation in the context of digitalization. While online sales offer economic opportunities for local producers, they also pose significant public health risks, particularly to youth.

Strategies for effective regulation

To mitigate the potential negative impacts of online tobacco sales on public health, several strategies should be considered. Strengthening Age Verification Mechanisms, Regulators must work with online platforms to develop robust age verification systems that prevent minors from purchasing tobacco products. This could involve utilizing technology such as identity verification tools that require buyers to provide proof of age before completing a transaction.

Promoting Responsible Marketing Practices, Regulators should establish guidelines for responsible online marketing of tobacco products. This includes clear labeling of promotional content and prohibiting misleading advertisements that target vulnerable populations.

Public Awareness Campaigns, increasing public awareness about the dangers of tobacco consumption, especially among youth, is essential. Campaigns utilizing digital platforms can effectively reach younger audiences and convey important health messages.

Conclusion

The results of this study indicate that digitalization significantly influences the legality and regulation of tobacco sales. While it presents opportunities for local producers, it also raises challenges that need to be addressed to protect public health. The involvement of Gapoktan Sumber Rejeki provides valuable insights into how local farmers are navigating this complex landscape. By fostering collaboration between producers, legal experts, and regulatory bodies, it is possible to create a framework that supports sustainable tobacco production while safeguarding consumers from health risks. Overall, the research highlights the need for adaptive regulatory approaches that can keep pace with technological advancements and ensure that the benefits of digitalization are harnessed while minimizing potential harms associated with tobacco consumption.

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References

- Bahl, D., Bassi, S., Thapliyal, N., Sinha, P., Arora, M., & Gill, M. S. (2023). Tobacco-related content on social networking sites: evidence from a youth-led campaign in India. *Journal of Global Health Reports*, 7, 1-10.
- Lencucha, R., Drope, J., Magati, P., & Sahadewo, G. A. (2022). Tobacco farming: overcoming an understated impediment to comprehensive tobacco control. *Tobacco Control*, 31(2), 308-312. doi: 10.1136/tobaccocontrol-2021-056564.
- Mittal, S. (2019). Smoking and tobacco use: Ill Effects on Reproductive, Maternal, Newborn, Child Health, and Adolescent (RMNCHA) Program—A Review. *Annals of the National Academy of Medical Sciences (India)*, 55(02), 065-073

- Sančanin, B., & Penjišević, A. (2024). Impacts of tobacco use and exposure to tobacco smoke on health, society, economy, and environment. *Medis – International Journal of Medical Sciences and Research*, 3(2), 25–29.
- Simion, C.-P., & Popa, Ș-C. (2024). Digitalization opportunities from the perspective of the public sector organizations: a systematic literature review.
- Ramadhani, T., Aulia, U., & Putri, W. A. (2023). Bahaya Merokok Pada Remaja. *Jurnal Ilmiah Kedokteran Dan Kesehatan*, 3(1), 185–195.
- Viegas, J. R. R., Szklo, A. S., Assunção, K. H. R., Pontes, B. M., & Mendes, F. L. (2022). Publicidade e Venda de Produtos de Tabaco em Plataformas Digitais de Delivery. *Revista Brasileira de Cancerologia*, 68(4).
- Wang, T. W., Gentzke, A., Sharapova, S., Cullen, K. A., Ambrose, B. K., & Jamal, A. (2018). Tobacco Product Use Among Middle and High School Students — United States, 2011–2017. *MMWR. Morbidity and Mortality Weekly Report*, 67(22), 629–633.