



Leveraging economic intelligence and stakeholder collaboration to eradicate illegal plain cigarettes

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ABSTRACT

Background: Indonesia ranks third globally in the number of smokers, despite government efforts to reduce cigarette consumption. The continued rise in smoking is linked to the circulation of illegal cigarettes, which threaten public health, state revenue, and the national tobacco industry. This study aims to examine the distribution dynamics of illicit cigarettes and analyze stakeholder strategies to combat the issue. **Methods:** A qualitative approach was used, involving interviews, document analysis, and literature review. Data were analyzed thematically to explore patterns in stakeholder roles and motivations. **Findings:** Economic incentives drive the illegal cigarette trade, which disrupts legal markets and undermines tax revenue. Stakeholder participation varies by institutional interest and authority, influencing enforcement outcomes. Weak coordination and limited use of economic intelligence were identified as key challenges. **Conclusion:** Addressing illegal cigarette distribution requires stronger stakeholder collaboration and strategic use of economic intelligence. **Novelty/Originality of this article:** This study provides new insights into the role of economic intelligence and stakeholder dynamics in tackling illicit cigarette trade in Indonesia.

KEYWORDS: excise; illegal cigarettes; economic intelligence.

1. Introduction

Indonesia, as one of the most populous countries in the world, ranks third globally in terms of active smokers, according to data from the Tobacco Atlas 2020 (Triyono, 2020). In 2021, the Ministry of Health released findings from the Global Adult Tobacco Survey (GATS), which highlighted a significant increase in the number of adult smokers in the country. The number rose from 60.3 million in 2011 to 69.1 million in 2021—an increase of 8.8 million smokers within a decade. Moreover, the GATS also revealed a tenfold rise in e-cigarette users and a marked increase in the prevalence of passive smokers, which reached 120 million individuals (Ministry of Health of the Republic of Indonesia, 2022).

In response, the Indonesian government has implemented a range of tobacco control measures. These include the mandatory display of pictorial health warnings on cigarette packaging, restrictions on cigarette advertisements on television, and the imposition of excise taxes on tobacco products. The excise tax policy, in particular, serves as a regulatory tool to curb cigarette consumption. This approach is aligned with the 2020–2024 National Medium-Term Development Plan, which emphasizes improving human resource quality by reducing smoking prevalence. Despite these efforts, according to a 2021 report by CNBC Indonesia (2022), average monthly household expenditures on cigarettes (12.3%) in both urban and rural areas exceed those for basic necessities such as rice (11.2%), meat (4.74%),

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and milk (5.66%). This indicates a troubling prioritization of cigarette consumption over essential nutritional needs.

A key factor contributing to the persistent and increasing level of cigarette consumption is the widespread availability of illegal cigarettes. There is a strong correlation between rising excise rates and the proliferation of illicit tobacco products. As excise taxes increase, the retail price of legal cigarettes also rises, prompting consumers—especially those from lower-income groups—to turn to cheaper, illegal alternatives. Studies by Shaw & Reitano (2020), Kupatadze (2021), and Schafferer et al. (2018) support this assertion, noting that tax hikes on tobacco products tend to drive greater circulation and consumption of illegal cigarettes. These illicit products are often distributed through informal markets and are sold at significantly lower prices—ranging from IDR 8,000 to IDR 10,000 per pack—compared to the IDR 35,000 typically charged for legal brands (Pravitasari, 2014).

The extent of illegal cigarette circulation in Indonesia has been documented through surveys conducted from 2010 to 2022. Although recent data show a decline in illegal cigarette prevalence to 5.5% in 2022, the issue remains concerning, particularly as most violations involve cigarettes without excise stamps.

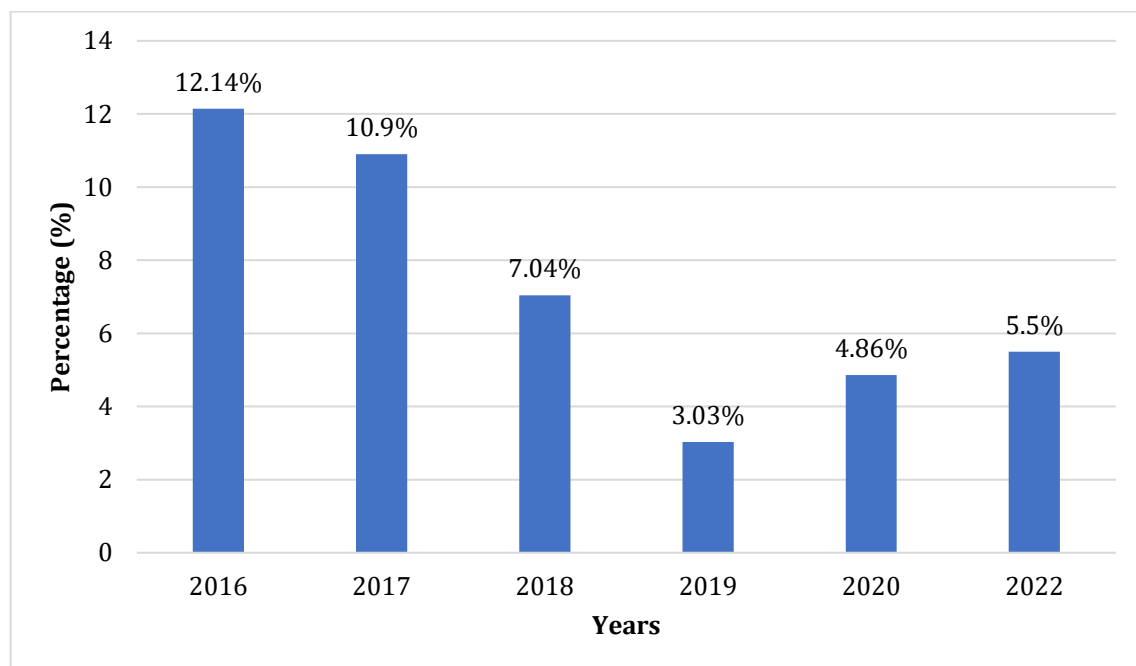


Fig. 1. Illegal cigarette survey results 2016 – 2022
(Kurniati, 2022)

The continued presence of illegal cigarettes poses significant threats to national revenue from tobacco excise duties. The Directorate General of Customs and Excise (DGCE), as the primary agency tasked with overseeing tobacco regulation, bears a considerable burden in efforts to mitigate the spread of illicit cigarettes. Given the complexity and scale of this challenge, effective coordination and collaboration with relevant stakeholders are imperative to support and enhance the effectiveness of enforcement efforts.

The concept or theoretical framework employed in this article is the concept of national resilience, with a particular focus on economic resilience. Economic resilience is selected due to the close correlation between the circulation of illegal cigarettes and its impact on state revenue as well as the stability of the legal tobacco industry in Indonesia. In practice, economic resilience is operationalized through stakeholder analysis. This analysis is utilized to formulate strategic approaches to stakeholder participation in efforts to eradicate the circulation of illegal cigarettes.

The theoretical foundations underpinning this article include economic crime theory, excise theory, and economic intelligence theory. Economic intelligence is applied in mapping potential threats and risks, as well as in analyzing information that serves as the

basis for developing stakeholder participation strategies aimed at combating the proliferation of illegal cigarettes.

2. Methods

The research method employed in this article adopts a qualitative approach. Qualitative methods are designed to explore and interpret relationships among variables and phenomena without relying on quantitative (statistical) measurements. In this study, a case study approach is utilized within the qualitative framework. This approach is chosen to enable the researcher to obtain a comprehensive understanding of a particular case by collecting relevant data and information over a defined period. The case study examined in this research focuses on the supervision of illegal cigarettes conducted by the Directorate General of Customs and Excise/*Direktorat Jenderal Bea dan Cukai* (DJBC) and its impact on the level of illegal cigarette circulation in Indonesia during the 2018–2022 period.

The data collection technique employed in this study involves in-depth interviews. This technique is selected to gather detailed and comprehensive insights into the issue under investigation. Informants are selected through purposive sampling, wherein individuals are chosen based on specific criteria relevant to the research topic, namely their involvement or expertise in the circulation of illegal cigarettes. The selected informants include Mr. G.H., Head of the Enforcement Sub-Directorate at DJBC Headquarters; Mr. F.D., Senior Analyst at the Indonesian Fiscal Policy Agency; Mr. D.M., Civil Servant Investigator at the Sibolga Customs and Excise Office; Mr. A.K., Civil Servant Investigator at the Kudus Customs and Excise Office; Mr. J.K., a seller of illegal cigarettes; and Mr. A., an informant agent for DJBC. In addition to primary data collected through interviews, a literature review was conducted, classifying previous research on illegal cigarettes into three principal themes: the causes and impacts of illicit cigarette circulation, the effect of excise tax policies on legal and illicit cigarette consumption, and the measurement of illegal cigarette consumption and circulation levels. This review identified numerous key studies under each theme, which serve as the foundation for the current research (van Walbeek et al., 2023; Shaw & Reitano, 2020; Kupatadze, 2021; Nguyen et al., 2014; Joossens & Raw, 2012; Goodchild et al., 2020; Ross et al., 2015; Aziani et al., 2020).

The second category of literature primarily addresses the influence of excise tax adjustments on cigarette consumption elasticity, encompassing both the legal and illegal markets. Notable contributions in this area include work by Schafferer et al. (2018), Maldonado et al. (2020a, 2020b), Ross et al. (2020), Liber et al. (2015), Agaku et al. (2016), Little et al. (2021), and various other studies examining this tax-consumption relationship (Divino et al., 2020; Paraje, 2018; Morais et al., 2018; Kaplan et al., 2018; Golestan et al., 2021; Lavares, 2022; Nguyen et al., 2019b). The third research category concentrates on methodologies for quantifying the level of illicit cigarette consumption and distribution. This body of literature includes key studies by Liutkut'e-Gumarov et al. (2020), Szklo et al. (2020), and Shakya et al. (2021), alongside numerous other methodological contributions (Curti et al., 2015; Pizarro et al., 2022; Juarez et al., 2021; Little et al., 2020; Khan, 2020; Kasri et al., 2021; Nguyen et al., 2019a). Stakeholder analysis in this study will be conducted in several stages, as outlined by Reed et al. (2009), namely: stakeholder identification; assessment of stakeholder interests and influence; determination of stakeholder roles; and formulation of stakeholder participation strategies.

3. Results and Discussion

3.1 The threat of upstream and downstream illegal cigarettes

To comprehensively map the threat posed by plain illegal cigarettes, it is crucial to understand the supply chain of these products from upstream to downstream areas. According to Mr. G.H., Head of the Enforcement Sub-Directorate of DJBC, the upstream sources of illegal cigarettes are categorized into two groups: domestic and international. The

primary distinction lies in the origin of production—domestic upstream refers to illegal cigarettes produced within Indonesia, whereas international upstream refers to products originating from abroad. Domestically, the provinces of East Java and Central Java serve as major upstream areas due to their extensive tobacco plantations. Illegal cigarette production across both regions operates on various scales, from small to large, typically functioning as independent entities. These illicit operations often thrive due to collusion with law enforcement officials who provide protection for their activities. Factory locations are strictly confidential and closely monitored by those involved. The production process itself is generally streamlined into three stages: tobacco storage, cigarette rolling, and packaging. Crucially, to sustain their operations, manufacturers employ a 'Robin Hood' strategy, distributing financial benefits to garner public attention and, critically, community support and protection. This local support frequently manifests as active resistance, including physical confrontation, against monitoring and enforcement teams from the Directorate General of Customs and Excise, as reported in regional data. The cultural context in Madura presents a unique and significant enforcement challenge, where manufacturers often receive support from or are themselves traditional or religious leaders. Given the high value and unquestioning respect Madurese culture places on these figures, their endorsement acts as a significant structural barrier to effective monitoring and upstream enforcement by government officials (Fig. 2).

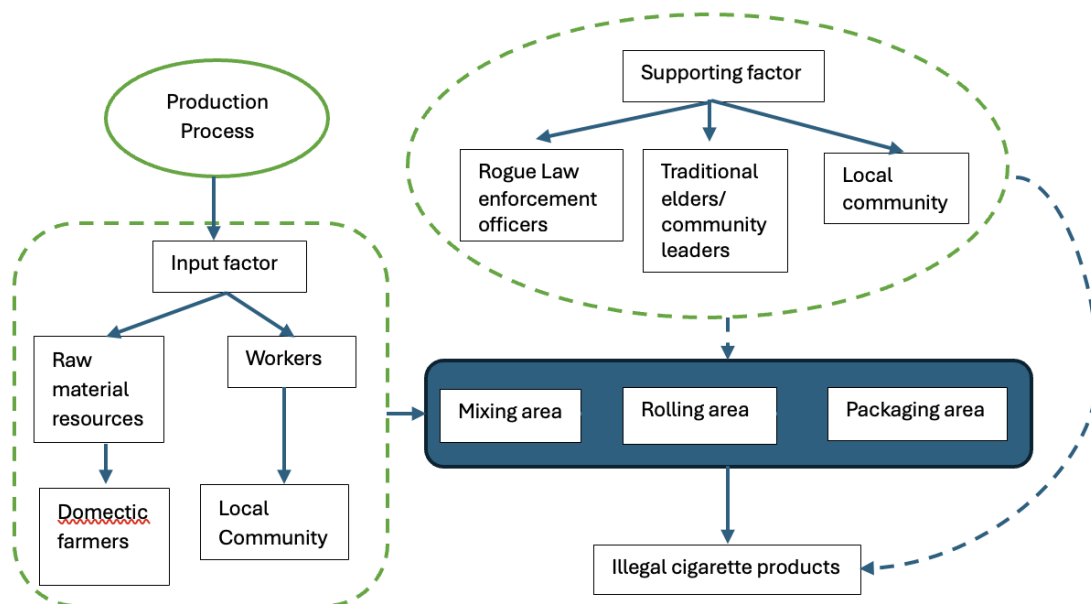


Fig. 2. Overview of upstream areas of illegal cigarette production in Indonesia

Meanwhile, international upstream regions are located along the eastern coastline of Sumatra, notably in Riau and Jambi Provinces. The strategic geographical condition of Sumatra, particularly its location near the Strait of Malacca—one of the world's busiest trade routes—renders it highly susceptible to smuggling. This susceptibility is amplified by the extensive network of tributaries scattered along the east coast, from Aceh to Lampung, which provide direct maritime access into residential areas. The illicit trade utilizes this network, frequently establishing small, traditional wooden piers and corresponding warehouses along the rivers for storing smuggled goods. Illegal cigarettes entering Sumatra through this route originate predominantly from overseas, including Vietnam, Singapore, and Thailand. Based on DJBC's national enforcement data, the majority of seized illegal cigarettes are domestically produced, although significant quantities of foreign-origin cigarettes have also been intercepted. Notably, in the past two years, there has been a marked increase in the entry of illegal cigarettes from China, which is suspected to correlate with the rising number of Chinese migrant workers in Indonesia.

and even members of law enforcement agencies/*Aparat Penegak Hukum* (APH) who may protect these activities. A common thread uniting these actors is their economic motivation.

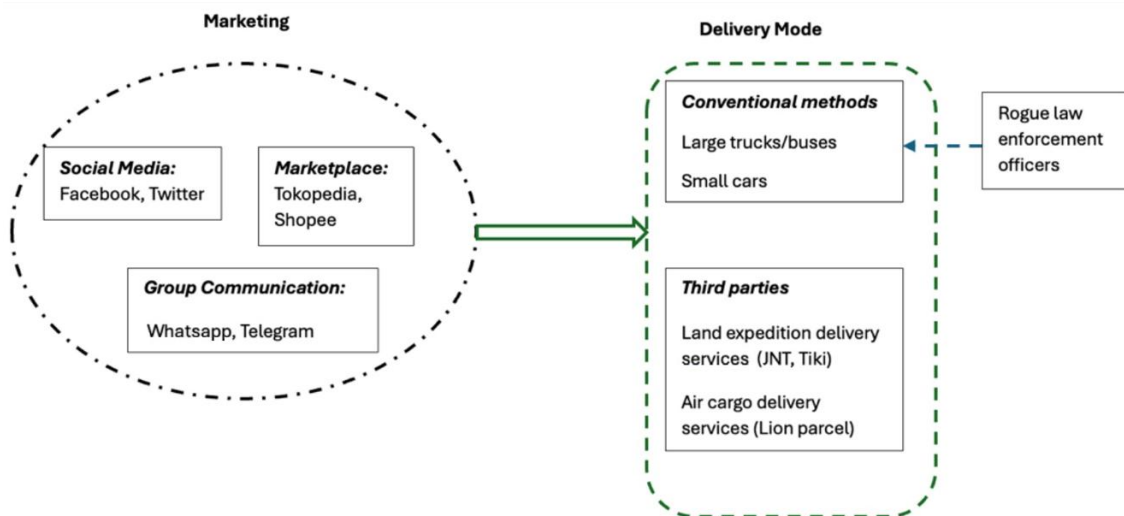


Fig. 5. Illegal cigarette distribution overview

In general, the increased circulation of plain illegal cigarettes significantly undermines state revenue from tobacco excise. Because these products are not affixed with excise stamps, they evade the excise tax entirely. As Mr. F. D. emphasized, the proliferation of plain illegal cigarettes directly impairs the government's ability to achieve tobacco excise revenue targets. This poses a substantial risk to public finances, as revenue from tobacco excise contributes approximately $\pm 10\%$ to the total national revenue outlined in the State Budget. A decline in this revenue stream can have cascading consequences for the state. Furthermore, the increased presence of illegal cigarettes disrupts the stability of the legal tobacco industry. Data indicate a year-over-year decline in legal cigarette production, attributable in part to market displacement by illicit products. This decline inevitably reduces sales and profitability for licensed cigarette manufacturers. If left unaddressed, prolonged revenue losses may jeopardize the financial viability of these companies, potentially leading to business closures and heightened unemployment. Given that the tobacco industry is labor-intensive, factory closures would exacerbate joblessness. This domino effect of increasing illegal cigarette circulation must be mitigated immediately through coordinated government intervention involving all relevant stakeholders. It would be ineffective for a single institution to bear the burden of eradicating illegal cigarettes alone.

3.2 Circulation of illegal cigarettes in Indonesia

The high circulation of illegal cigarettes without excise stamps, or plain cigarettes, in Indonesia can be categorized by their source into two categories: domestically produced plain cigarettes and foreign-produced plain cigarettes. Domestically produced plain cigarettes are those produced illegally or clandestinely and not reported to customs and excise offices. The areas where these illegal cigarettes are produced are East Java and Central Java. Meanwhile, foreign-produced plain cigarettes are smuggled into Indonesia without permits. These illegal cigarettes primarily come from the east coast of Sumatra and the land border with Kalimantan.

The massive distribution of illegal cigarettes, both domestically and internationally, has become an interesting topic for a more in-depth analysis to determine the factors that influence the high circulation of illegal cigarettes in Indonesia. Based on data from a survey on the distribution of illegal cigarettes, 689 packs of illegal plain cigarettes were found domestically, and 727 packs from abroad. Compared to other types of illegal cigarettes, plain cigarettes dominate the distribution of illegal cigarettes in Indonesia, accounting for 42.7%. Interviews with key informants identified three major factors contributing to the circulation

of illegal cigarettes in Indonesia. The first is the government excise policy. The second is geographic and demographic factors. Finally, socio-cultural factors. Government policy is a key factor in the increasing circulation of illegal cigarettes. One of the policies contributing to the rise in illegal cigarettes is the annual increase in cigarette excise rates. This policy, which continues to increase annually, has driven up the selling price of legal cigarettes. The price of official cigarettes like Marlboro and Gudang Garam has now reached Rp 40,000 to Rp 45,000. Compared to plain illegal cigarettes, the price is significantly lower. Plain illegal cigarettes sold to the public range from Rp 8,000 to Rp 10,000. This has led low-income people to choose cheaper cigarettes.

In addition to the policy regarding tariffs and the classification of tobacco excise rates, another issue highlighted by government policy is the low level of public education on the dangers of illegal cigarettes, particularly in the form of public service announcements. Raising public awareness of illegal cigarettes is crucial, as the public, as the primary consumers of cigarettes circulating in the community, must be able to distinguish between legitimate and illegal cigarettes. The government has only recently implemented regulations restricting the form of promotion and broadcast hours for cigarette advertisements, as stipulated in Law No. 32 of 2002 concerning Broadcasting and Government Regulation No. 50 of 2005 concerning the Implementation of Broadcasting by Private Broadcasting Institutions. These regulations focus solely on providing education on the dangers of cigarettes and do not address illegal cigarettes. The increasing circulation of illegal cigarettes each year is also influenced by geographic and demographic factors. These two factors significantly contribute to the circulation of illegal cigarettes in Indonesia. As explained above, illegal cigarettes originate from abroad, not only domestically but also from abroad. Illegal cigarettes from abroad are mostly smuggled through the east coast of Sumatra. Why is this route a major route for illegal cigarette smuggling? explains that the east coast of Sumatra is a favorite smuggling hotspot for several reasons. First, the east coast of Sumatra is located right on the international crossing of the Strait of Malacca. As is known, the Strait of Malacca is one of the busiest shipping lanes in the world, with more than 70,000 ships passing through it, equivalent to a quarter of world trade. Therefore, this route is a favorite spot for smugglers to illegally bring goods into Indonesia.

Furthermore, the contours of Sumatra's east coast are highly conducive to smuggling. The east coast of Sumatra is lined with rivers that directly connect to the sea, allowing ships to easily enter directly from the sea and hide in the rivers scattered along the east coast of Sumatra. These rivers are even deep enough for large vessels to enter. Furthermore, these rivers flow far into residential areas, making it easier for smuggled illegal cigarettes to spread. Coastal communities are also characterized by numerous docks along the rivers, which are often used to unload smuggled goods. Sumatra's increasingly strategic position for the distribution of illegal cigarettes is because Sumatra has the second largest population in Indonesia, and the majority of Sumatrans are manual laborers with low incomes and education levels. With such high demand for cigarettes, but not sufficient financial resources, many smokers resort to cheap or illegal cigarettes. In addition to the east coast of Sumatra, the land border in Kalimantan is also a key entry point for illegal cigarette smuggling into Indonesia. Illegal cigarette smuggling across the Kalimantan border utilizes back roads along the border between the two countries. Back roads are illegal routes used by smugglers to smuggle cigarettes from Malaysia into Indonesia. These routes extend throughout West Kalimantan Province, from Jagoi Babang, Nanga Badau, to Entikong. These back roads are scattered along the border and through forest paths, making it difficult for officials to monitor. In addition to the factors explained above, there are other underlying reasons for the continued circulation of illegal cigarettes in Indonesia: socio-cultural factors. In the Great Indonesian Dictionary, socio-cultural is defined as matters relating to the social and cultural aspects of society. Looking at the history of cigarettes in Indonesia in the book *Kretek Pusaka Nusantara* (Sunaryo, 2013), cigarettes have been a staple of Indonesian society since the 16th century. In fact, smoking has become an integral part of Indonesian culture. Kretek smoking even became a lifestyle among the Indonesian nobility during that time. To this day, smoking remains an integral part of Indonesian life. There's even a

common Indonesian expression, "Money for Cigarettes," which is associated with expressing gratitude for a favor.

These illegal cigarettes are sought after by people with limited or low incomes. With a high smoking rate and low incomes, many fishermen seek affordable cigarettes. Their desire is simple: to smoke, regardless of the brand, as long as they can smoke. Low incomes make the higher-priced legal cigarettes unaffordable for those in low-income groups. Yet, these low-income groups are the target market for illegal cigarettes. This lack of awareness about the dangers of cigarettes, especially illegal cigarettes, leads them to believe that "the important thing is to smoke." This also correlates with previous research conducted by Juarez et al. (2021) and Aziani et al. (2020), which found a correlation between education level and a person's decision to smoke illegal cigarettes. These studies found that the majority of people with low education tend to purchase illegal cigarettes more frequently than legal cigarettes.

3.3 Stakeholder identification

In efforts to reduce the circulation of illegal cigarettes, the Directorate General of Customs and Excise cannot act in isolation. Effective supervision requires strong synergy and collaboration among relevant stakeholders. Therefore, a stakeholder analysis is essential to map out and formulate appropriate strategies for stakeholder involvement. Each stakeholder has distinct roles and characteristics aligned with their respective duties and functions in mitigating the spread of illegal cigarettes. Accordingly, a strategy is needed to ensure each stakeholder can be actively engaged in eradication efforts.

Based on interview findings with several key informants, a preliminary mapping was established identifying the stakeholders critical to combating the circulation of illegal cigarettes. These stakeholders include: the Directorate General of Customs and Excise, regional governments, the Ministry of Industry, the Ministry of Communication and Information Technology, the Ministry of Health, law enforcement officers, official cigarette manufacturers, retail cigarette sellers, delivery service companies, e-commerce platform providers, and the general public.

Table 1. Stakeholder identification

Name of the stakeholder	Interest level	Stakeholder status
Directorate General of Customs and Excise	5	Main
Local Government	4	Main
Law Enforcement Officers	4	Main
Ministry of Industry	3	Supporter
Deposit/Delivery Service Company	2	Supporter
E-Commerce Companies	2	Supporter
Ministry of Communication and Information Technology	2	Supporter
Ministry of Health	3	Supporter
Official Cigarette Entrepreneurs	3	Supporter
Retail Cigarette Seller Entrepreneurs	1	Supporter
Community	1	Supporter

Each of the stakeholders listed above possesses a varying level of interest in the issue of illegal cigarettes. DJBC holds the highest level of interest (level 5) as it is the main institution responsible for the supervision of cigarette circulation and the collection of state revenue through excise duties. The Regional Governments and law enforcement agencies rank at level 4, given their respective responsibilities that are indirectly tied to monitoring and enforcing laws against the illegal cigarette trade. The Ministry of Industry, the Ministry of Health, and official cigarette entrepreneurs are positioned at level 3, reflecting their considerable interests. The Ministry of Industry is concerned with sustaining the domestic cigarette industry, while the Ministry of Health is focused on controlling cigarette consumption due to its public health implications. Meanwhile, official cigarette

entrepreneurs are invested in maintaining their production and sales levels in the face of illegal competition.

Stakeholders with a lower level of interest (levels 1 and 2) include the Ministry of Communication and Information Technology, delivery service providers, e-commerce companies, retail cigarette sellers, and the general public. These entities generally have peripheral involvement in the issue, as illegal cigarettes are not central to their core business processes or primary functional mandates. Consequently, their level of interest is comparatively lower. In terms of stakeholder status, DJBC, the Regional Government, and law enforcement agencies are considered the primary stakeholders due to their direct responsibilities in law enforcement and regulatory supervision. The remaining stakeholders are categorized as supportive stakeholders who, although not central to the enforcement process, play complementary roles in supporting broader efforts to curb the circulation of illegal cigarettes.

3.4 Determination of stakeholder interests and influence

Following the identification of relevant stakeholders, the next crucial step is to assess their levels of interest in the success of the program and their influence on efforts to eradicate the circulation of illegal cigarettes. The level of interest is determined based on the significance of each stakeholder's role in overseeing and taking action against the illegal cigarette trade, particularly in relation to their assigned duties and functions. The resulting interest assessment of stakeholders is presented in the table below:

Table 2. Stakeholder interest assessment

No.	Stakeholder	Interests	Importance for success
1	Directorate General of Customs and Excise	Conducting surveillance of cigarette distribution Regulating cigarette-related businesses Generating state revenue through excise duties	5
2	Local Government	Reducing illegal cigarette circulation to increase excise revenue Utilization of DBH-CHT (Revenue Sharing Funds from Tobacco Excise) for monitoring activities	5
3	Law Enforcement Officers	Protecting the public from the dangers posed by illegal products	5
4	Ministry of Industry	Supporting the stability of the domestic cigarette industry Regulating the import of cigarette production equipment	3
5	Ministry of Communication and Information Technology	Indirect concern over illegal cigarettes Authority to shut down related social media accounts	3
6	Ministry of Health	Reducing smoking prevalence No direct authority in cigarette monitoring	2
7	Cigarette Entrepreneurs	No authority to supervise illegal cigarettes	2
8	Delivery Service Companies	Channels for distributing illegal cigarettes Authority to refuse delivery of such products	4
9	E-Commerce Companies	Online marketplace for illegal cigarettes Authority to block accounts selling such products	4
10	Grocery Store Entrepreneurs	Traditional points of sale for illegal cigarettes	3
11	Community	Indirectly affected but no regulatory function	2

The stakeholders who received the highest scores in the assessment were the Directorate General of Customs and Excise, regional governments, and law enforcement officials. These stakeholders are ranked at the highest level due to their key responsibilities and functions in the supervision and regulation of illegal cigarettes. As such, they play a crucial role in the efforts to combat the circulation of illegal cigarettes. Delivery service companies and e-commerce platforms were assigned a level 4 due to their significant role in the distribution of illegal cigarettes across regions, as well as their ability to facilitate public access to these illegal products. Hence, these two stakeholders are deemed important in the eradication efforts.

The Ministry of Industry and the Ministry of Communication and Informatics were rated at level 3, owing to their regulatory roles that support the fight against illegal cigarettes. These ministries contribute through the formulation of policies, such as restrictions on the import of illegal cigarette manufacturing machines and the dissemination of public service campaigns related to illegal cigarettes. Grocery store entrepreneurs also fall under level 3, as they serve as traditional distribution points for illegal cigarettes, making their involvement significant. The Ministry of Health, legal cigarette manufacturers, and the general public were rated at level 2. These stakeholders, although important in the broader context of cigarette regulation and public health, do not have direct involvement or influence over the supervision of illegal cigarette circulation. Their roles are more peripheral in terms of actively controlling illegal cigarette flows. Following the stakeholder interest assessment, the influence of each stakeholder was also evaluated. The level of influence reflects the power or authority each stakeholder holds in the context of reducing illegal cigarette circulation. Based on this evaluation, the following influence levels were assigned.

Table 3. Stakeholder influence assessment

No.	Stakeholder	Influence	Degree of influence
1	Directorate General of Customs and Excise	Regulatory and enforcement authority over cigarette trade	5
2	Local Government	Local enforcement and administrative authority	4
3	Ministry of Industry	Authority to regulate importation of cigarette production equipment	3
4	Ministry of Communication and Information Technology	Authority to broadcast public service messages Capability to shut down non-compliant digital platforms	3
5	Ministry of Health	Role in public education on smoking risks	2
6	Law Enforcement Officers	Broad law enforcement capabilities	4
7	Cigarette Entrepreneurs	Limited influence in enforcement or regulation	2
8	Delivery Service Companies	Authority to reject shipment of illegal goods	3
9	E-Commerce Companies	Authority to close accounts dealing in illegal products	3
10	Grocery Store Entrepreneurs	Influence over local distribution channels	2
11	Community	No formal authority or regulatory power	1

The Directorate General of Customs and Excise holds the highest level (scale 5) in this assessment due to its primary duties and authority over the supervision of illegal cigarettes. DJBC is empowered to take direct action and oversee the circulation of illegal cigarettes in the market, even at the point of entry from abroad. The next stakeholders with significant influence are the Regional Government and law enforcement agencies, which possess the authority to oversee illegal cigarette circulation based on their general regulatory

knowledge. However, as the supervision of illegal cigarettes is not their primary responsibility, they were assigned a score of 4 in the assessment.

In addition, the Ministry of Industry, the Ministry of Communication and Information Technology, delivery service companies, and e-commerce platforms were rated at level 3. These stakeholders possess indirect authority to influence the prevention of illegal cigarette circulation through their respective roles in regulation and business operations. The Ministry of Health, legal cigarette manufacturers, and grocery store entrepreneurs received an influence score of 2, as they do not have significant authority over the supervision of illegal cigarettes. Lastly, the community was assigned a scale of 1, as it lacks both the influence and authority required for involvement in the supervision of illegal cigarettes in Indonesia.

In the interest and influence assessment, the various stakeholder interests regarding illegal cigarettes have been clarified. Additionally, the authority and influence of each stakeholder, as well as the applicable legal frameworks governing these powers, have been outlined. Based on this analysis, a matrix for the assessment of stakeholder interests and influence was developed.

Table 4. Importance and stakeholder influence assessment matrix

		The Importance of Stakholders				
		Not important	A little important	Half important	Important	Very important
		1	2	3	4	5
Stakeholder influence levels	No influence	1	Community			
	Slightly influential	2	Ministry of Health, Cigarette Entrepreneurs,	Grocery Store Seller		
	Half influential	3		Ministry of Industry, Ministry of Communication and Informatics	Shipping Service Company, E- Commerce	
	Influential	4				Regional Government, APH
	Highly influential	5				DJBC

The assessment matrix, which combines the evaluation of stakeholder interests and influence, reveals a clear distribution of importance and influence among the various stakeholders. In the matrix, three stakeholders stand out for their high level of both importance and influence: the Directorate General of Customs and Excise, the Regional Governments, and law enforcement agencies. These stakeholders play a central role in the eradication of illegal cigarettes, due to their significant responsibilities and authority in regulating and overseeing illegal cigarette circulation.

The remaining stakeholders, positioned in the middle of the matrix, are categorized as supporting stakeholders. While these stakeholders contribute to the broader efforts to combat illegal cigarettes, the issue of illegal cigarette circulation is not their primary focus. Nevertheless, each of these stakeholders has a defined role in the fight against illegal cigarettes. Following the determination of the stakeholder interest and influence matrix, the next step is to assess and define the specific roles of each stakeholder in the broader efforts to eradicate illegal cigarettes.

3.5 Determining the role of stakeholders

Following the mapping of stakeholder interests and influence assessments, the next step is to determine the role of each stakeholder based on their respective levels of interest and influence. The framework for this role determination is drawn from Bryson (2004), who categorizes stakeholders into four distinct roles: Key Player, Contest Setter, Subject, and Crowd. The matrix below presents the results of the stakeholder role analysis based on Bryson's framework:

Table 5. Stakeholder role analysis matrix

Importance Level	Subject Cigarette Entrepreneurs Ministry of Health	Key player DJBC Pemda APH
	Crowd Grocery Store Sellers Community	Contest Setter Ministry of Industry Ministry of Communication and Information Delivery Service Company E-Commerce Services
Influence level		

Based on the stakeholder role analysis matrix according to Bryson (2004), stakeholders are classified into four categories: Key Players, Contest Setters, Subjects, and Crowds. Key Players are stakeholders who are actively involved and possess both high interest and influence. According to the matrix, the three primary stakeholders—DJBC, Regional Governments, and APH—fall under this category. Contest Setters are stakeholders who wield significant influence but have limited stakes in the issue at hand. In this case, the Ministry of Communication and Informatics, the Ministry of Industry, Delivery Service Companies, and E-Commerce Companies are identified as Contest Setters. While these stakeholders have considerable authority over the supervision of illegal cigarette circulation, this responsibility is not their central function or business activity.

Subjects are stakeholders who hold a high interest but lack the necessary influence. The Ministry of Health and legal cigarette entrepreneurs are placed in this category. The Ministry of Health seeks to reduce cigarette consumption for public health purposes, while legal cigarette entrepreneurs aim to maintain the production and sale of cigarettes. However, both stakeholders lack direct authority or influence over the control of illegal cigarettes. The Crowd refers to stakeholders with low interest and influence in policy implementation, but who still exert some effect on the desired outcome. Grocery store owners and the general public are categorized here. While these stakeholders do not have substantial influence or interest in supervising illegal cigarettes, they are directly involved in the distribution process. Grocery stores often serve as venues for the sale of illegal cigarettes, and the public constitutes the ultimate consumer. Although their role is of lesser importance and influence, increasing the engagement of these stakeholders could significantly impact the circulation of illegal cigarettes.

3.6 Stakeholder engagement strategy

Once the interests and influences of stakeholders are identified and the roles of each stakeholder are mapped, the next step is to determine an effective strategy for stakeholder participation in policy implementation. The stakeholder participation strategy should be developed to the technical level, involving the relevant stakeholders according to their specific roles and responsibilities in the area of illegal cigarette control. This approach ensures that each stakeholder can focus on their respective duties, aligning with their authority and responsibilities. Consequently, the supervision activities can be carried out in a coordinated and effective manner. Based on this, a matrix of stakeholder engagement strategies, which considers the stakeholders' levels of interest and influence, can be constructed as follows:

Table 6. Stakeholder engagement strategies matrix

Supervision	Information Sharing	Consultation	Collaboration	Empowerment
Upstream (Domestic)	Community, Cigarette Entrepreneur	Ministry of Industry	DJBC, APH, Local Government	Not specified
Upstream (Overseas)	Community, Society (Figures)	Not specified	DJBC, APH, Local Government	Not specified
Distribution	Ministry of Communication and Informatics, Shipping Service Companies, E-Commerce Companies	Not specified	DJBC, APH	Not specified
Downstream	Community	Community (Figures), Grocery store sellers, Ministry of Information, Ministry of Health	DJBC, APH, Local Government	Not specified
Participation Strategy	Socialization, Soft Approach	Becoming a DJBC informant, a Soft Approach	SMEs, meetings, involvement of activities, budget synergy	PKS, Information Sharing, Joint Activity

In the stakeholder participation strategy, each stakeholder's expected involvement in the various aspects of illegal cigarette control is determined. There are four types of participation expected from each stakeholder: Information Sharing, Consultation, Collaboration, and Empowerment. Information Sharing refers to one-way participation, where stakeholders primarily receive information from others. Consultation involves a two-way participatory process, where feedback or responses are expected from stakeholders, allowing for impact and influence on the activities. Collaboration is a more active form of participation, where stakeholders are expected to synergize in monitoring activities related to illegal cigarettes. Empowerment, on the other hand, involves strengthening the stakeholders' roles and functions, encouraging full commitment to the supervision of illegal cigarette circulation with consistency and accuracy.

Based on the stakeholder analysis, it is evident that three key players—DJBC, Regional Governments, and APH—are included in the empowerment participation strategy. These stakeholders play a crucial role and must be fully engaged in efforts to reduce illegal cigarettes. DJBC, in particular, is central to the efforts, and their involvement is expected to foster understanding and increase the interest of Regional Governments and APH in combating illegal cigarettes. Local governments and APH can be engaged in every

supervisory activity initiated by DJBC. To enhance and increase their participation, DJBC can establish a Cooperation Agreement/*Perjanjian Kerja Sama* (PKS), which will formalize various collaborative efforts and synergies in reducing illegal cigarettes. This cooperation can strengthen intelligence activities, particularly in sharing and analyzing information to obtain more accurate and reliable data. Additionally, collaboration may extend to supervision activities, especially regarding security concerns, where APH personnel's presence and resistance are significant barriers to effective oversight.

Stakeholders in the collaboration participation strategy, while having influence and authority over regulations and actions related to illegal cigarette control, have relatively low interest in the issue. The strategy for engaging these stakeholders should involve frequent coordination and communication to ensure they feel involved and understand their important role in reducing illegal cigarettes in Indonesia. Participation can take the form of engagement in supervisory meetings, workshops, and the creation of Cooperation Agreements to raise awareness and increase their involvement in eradication efforts.

The next participation strategy, Consultation, targets three stakeholders: cigarette entrepreneurs, grocery store owners, and community leaders. The focus here is on fostering mutual communication and interaction that supports efforts to eradicate illegal cigarettes, particularly in terms of sharing information about their circulation. This two-way communication benefits all stakeholders. A unique strategy for grocery store owners involves offering them the opportunity to become DJBC intelligence agents. In this role, they would assist by providing valuable information on illegal cigarette sales in their areas.

Finally, the Information Sharing strategy involves the public, who, as the ultimate consumers of illegal cigarettes, must be educated to raise awareness and understanding of the negative impact of illegal cigarette consumption. By enhancing public understanding, the goal is to discourage the purchase of illegal cigarettes. The government's role in disseminating public service advertisements and socializing information about the dangers of illegal cigarettes is crucial in achieving this objective, as it can significantly increase public awareness and reduce demand.

4. Conclusions

Illegal cigarette distribution areas can be divided into two main areas: upstream and downstream areas in Indonesia. The upstream areas of illegal cigarettes in Indonesia can be divided into two: domestic (Java, particularly East Java and Central Java) and international (the East Coast of Sumatra). These illegal cigarettes are then transported to downstream areas, where they are marketed and widely consumed, on the islands of Sumatra, Kalimantan, and Sulawesi. Eleven stakeholders play a role in efforts to reduce illegal cigarettes in Indonesia. The most influential key players are the Directorate General of Customs and Excise, regional governments, and relevant law enforcement agencies, which have the authority to oversee the circulation of illegal cigarettes. Each stakeholder has unique powers and authorities unique to that stakeholder, according to their respective fields. Therefore, by maintaining coordination and uniting common interests regarding illegal cigarettes, it is hoped that efforts to eradicate illegal cigarettes will be integrated and more effective in reducing illegal cigarettes.

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Author Contribution

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