

THE ECONOMICS OF TOBACCO AND ITS VALUE-ADDED PRODUCTS

A CASE STUDY OF CIGARETTE, E-CIGARETTE
AND HTPS IN INDONESIA

May 2023
Jakarta, Indonesia



INDONESIAN DEVELOPMENT FOUNDATION
Jl, Kramat 6 no.5, Kenari, Senen
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LIST OF ACRONYMS

ENDS	Electronic nicotine delivery systems
Kretek	Cigarettes made of tobacco and clove
Riskesdas	Basic Health Survey of the Ministry of Health
Siskernas	National Health Indicators Survey
Secondhand smoke	Smoke comes from burning tobacco products, such as cigarettes, cigars, and/or pipes. It is also smoke that has been exhaled by the person smoking.
HTPs	Heated Tobacco Products (Heat-not-burned tobacco)
CHT	Excise Rates for Tobacco Products
DBH-CHT	Revenue Sharing Funds of Tobacco Products Excise
CRT	Cigars
HPTL	Other tobacco processing products including e-cigarettes
KLB	Hand-rolled corn husk cigarettes
KLM	Rhubarb cigarettes
SKM	Machine-rolled kretek cigarettes
SKT	Hand-rolled kretek cigarettes
SKTF	Hand-rolled kretek-filtered cigarettes
SPM	White cigarettes
SPT	Hand-rolled white cigarettes
SPTF	Hand-rolled white-filtered cigarettes
TIS	Shag tobacco or loose tobacco
PPPI	Indonesian Development Planners Association
APBN	National State Budgets
JKN	National health insurance program
THRPs	tobacco harm reduction products (refers to Heated Tobacco Products and e-cigarettes),

EXECUTIVE SUMMARY

Indonesia with a population of 275.8 million¹ is home to approximately 77,9 million adult smokers or 28,26% of its population in 2022². Despite the country's legal measures to control tobacco use, which include imposing tobacco excise taxes, implementing regulation on Smoke-Free Zones, tobacco packaging & labelling, and restricting tobacco advertising and sales, the country's smoking prevalence has not markedly declined³. The high rate of cigarette usage reflects in the average amount spent on cigarettes in the food category, ranking second only to expenditures on food and beverages⁴.

The cigarette market is expected to continue its expansion, with several prominent tobacco companies experiencing a resurgence in volume growth following a challenging year in 2019. In 2020, Sampoerna held the largest market share for cigarettes, accounting for 33%, while Gudang Garam secured the second position with a market share of 29%. Djarum claimed the third spot with a market share of 19%⁵.

With the expansion of the cigarette market, electronic cigarettes are emerging as a notable alternative. In recent years, the usage of e-cigarettes has witnessed a significant increase in the country. This rise can be attributed to the extensive marketing and sales efforts carried out on social media platforms⁶. According to the Global Adult Tobacco Survey (GATS) data, there has been a 3% increase in electronic cigarette smokers from 2011 to 2021⁷. Interestingly, Jambi province, despite having a population barely a third of Jakarta's, exhibits the highest percentage of e-cigarette users among the top 10 cities. Surprisingly, Jakarta itself does not even rank among the top cities with the highest e-cigarette usage⁸.

Demand for another alternative considered-less harmful tobacco product, such as Heated Tobacco Products (HTPs), has also increased in recent years, in part due to the persistent advertising from allied businesses and a greater awareness of the health risks linked with smoking. Although HTPs were first made available in Indonesia in recent years, by 2021 sales had nearly reached the level of e-vapour products. The establishment of factories in Indonesia and the expansion of distribution

¹ BPS Statistics Indonesia (2023) Jumlah Penduduk Pertengahan Tahun (Ribu Jiwa), 2020-2022, BPS Statistics Indonesia, Jakarta

² BPS Statistics Indonesia (2023) Persentase Merokok Pada Penduduk Umur ≥ 15 Tahun Menurut Provinsi (Persen), 2020-2022, BPS Statistics Indonesia, Jakarta

³ Statista (2023), Smoking rate in Indonesia 2015-2021, Statista; Available from: <https://www.statista.com/statistics/955144/indonesia-smoking-rate/>

⁴ Kusnandar, V. B. (2022). Ini Daftar Pengeluaran kelompok Makanan per Kapita Masyarakat, Rokok Nomor Dua Terbesar. Katadata. <https://databoks.katadata.co.id/datapublish/2022/12/13/ini-daftar-pengeluaran-kelompok-makanan-per-kapita-masyarakat-rokok-nomor-dua-terbesar>

⁵ Indonesia Investments. (2023). Tobacco & Cigarette Industry Indonesia | Indonesia Investments. Retrieved from <https://www.indonesia-investments.com/id/business/industries-sectors/tobacco/item6873?>

⁶ Martinez-Mejia, C. (2022). How Indonesian Youth Are Being Hooked On E-Cigarettes Through Social Media. Vital Strategies. Available from: <https://www.vitalstrategies.org/how-indonesian-youth-are-being-hooked-on-e-cigarettes-through-social-media/>

⁷ World Health Organisation [WHO]. (2022). Indonesia Comparison Fact Sheet 2011-2021. Global Adult Tobacco Survey (GATS). https://cdn.who.int/media/docs/default-source/ncds/ncd-surveillance/data-reporting/indonesia/indonesia-national-2011----2011-comparison-factsheet.pdf?sfvrsn=46869411_1

⁸ Ahdiat, A. (2022). 10 Provinsi dengan Konsumen Rokok Elektrik Terbesar. Katadata. <https://databoks.katadata.co.id/datapublish/2022/11/28/10-provinsi-dengan-konsumen-rokok-elektrik-terbesar>

channels indicate significant growth potential for HTPs in the country. However, at present, the demand for HTPs may be primarily limited to more affluent consumers due to their higher prices⁹. As opposed to combustible cigarette regulation, Indonesia only imposes an excise tax of 57% on HTPs and e-cigarettes as a form of regulation¹⁰. This tax implementation has proven beneficial for the government, leading to a substantial increase in revenue over the past five years. The government's earnings from this excise tax have grown from \$0.1 trillion in 2018 to \$1.02 trillion in 2022¹¹.

To gain insights into the market and consumer dynamics surrounding cigarettes and tobacco harm reduction products (THRPs), we conducted a study involving 750 respondents across five cities in Indonesia. The primary objective of the study was to explore how consumers perceive THRPs as an alternative for reducing the health risks associated with tobacco use. Additionally, we aimed to understand how consumer behaviour towards THRPs is influenced by factors such as price and taxes. By analyzing the data collected from this study, we aimed to uncover valuable information about the market landscape and consumer preferences in relation to THRPs in Indonesia.

The study, which took place over 15 months, revealed the market structure and characteristics, product accessibility and affordability, and excise taxes and tariffs for cigarettes, e-cigarettes, and HTPs.

This study also encompassed an examination of the respondent's demographic characteristics, their perception regarding combustible cigarettes, e-cigarettes, and THRPs as potentially less risky alternatives, and the perceived health impact associated with the use of these three products.

⁹ Supriyadi, A (2022) Indonesia Tobacco: Key Findings in 2022, Euromonitor International. Available from: <https://www.euromonitor.com/article/indonesia-tobacco-key-findings-in-2022>

¹⁰ Bigwanto, M., Nurmansyah, M. I., Orlan, E., Farradika, Y., & Purnama, T. B. (2019). Determinants of e-cigarette use among a sample of high school students in Jakarta, Indonesia. *International Journal of Adolescent Medicine and Health*, 34(3). <https://doi.org/10.1515/ijamh-2019-0172>

¹¹ Kristianus, A (2023). Kemenkeu: Setoran cukai Rokok Elektrik hanya RP 1,02 Triliun, investor.id. Available from: <https://investor.id/business/319620/kemenkeu-setoran-cukai-rokok-elektrik-hanya-rp-102-triliun>

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INTRODUCTION

1. The purpose of this report is to provide a general overview of cigarette, e-cigarette, and heated tobacco products in Indonesia, as well as how consumers perceive e-cigarettes and heated tobacco products as alternative risk-reduction products to reduce the health effect of smoking. This report concentrates on five Indonesian capital cities where empirical research was carried out; Jakarta, Bandung, Surabaya, Semarang, and Makassar are among the study cities.
2. This report is divided into three parts. The first segment provides a broad overview of the market structures for cigarette, e-cigarette, and heated tobacco products in Indonesia. Section 2 provides general information on consumer characteristics of the three products at research sites in Jakarta, Bandung, Surabaya, Semarang, and Makassar, and Section 3 will investigate the products' accessibility and affordability, as well as how consumers at the research site perceive THRP as an alternative to reducing health risks associated with the use of combustible cigarettes.
3. This report does not comprehensively assess consumers' preferences and the influence of excise tax policies and product prices on their choices among the three products. It does not consider factors such as switching between products, becoming dual users, or quitting the use of all three products. The limited data available on consumers' preferences and demand for these products, influenced by tax policies and price changes, indicates the need for future research in this area. Specifically, employing Discrete Choice Experiments to evaluate consumers' preferences would be valuable in understanding their decision-making process.

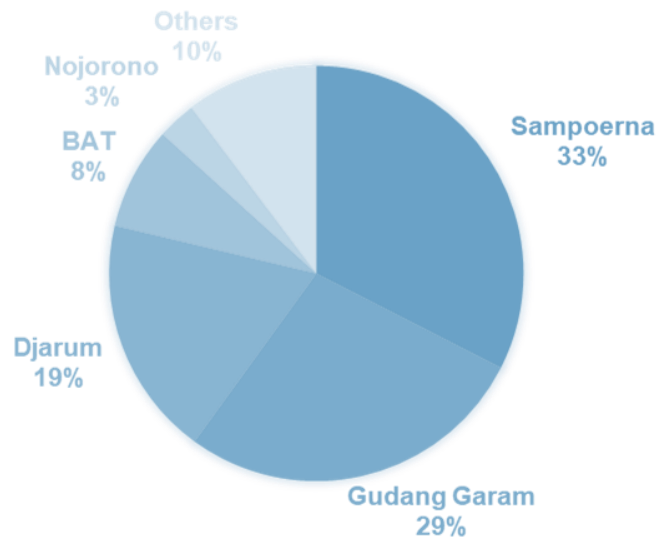
MARKET STRUCTURE AND CHARACTERISTICS

Market Structure and Characteristics of Combustible Cigarette

4. Indonesia has one of the largest cigarette markets in the world, and it is dominated by several large companies. The market structure can be classified as an oligopoly, with a small number of large firms holding significant control over the majority of the market. The leading cigarette company in Indonesia is PT HM Sampoerna Tbk, commanding a sizable 33% market share. Other major players include PT Gudang Garam Tbk, capturing 29% of the market share, PT Djarum with a 19% market share, and PT Bentoel Internasional Investama Tbk, accounting for an 8% market share. These prominent companies collectively exert substantial influence over the Indonesian market, controlling a significant portion of the market share¹².

¹² Indonesia Investments. (2023, April 20). Tobacco & Cigarette Industry Indonesia | Indonesia Investments. <https://www.indonesia-investments.com/id/business/industries-sectors/tobacco/item6873?>

Graph 1: Cigarette Industries' Market Share, 2020



Source: Data Indonesia (2021)

5. The Indonesian cigarette market is subject to substantial government regulations, particularly pertaining to advertising, packaging, and labelling¹³. Despite these regulations, the tobacco industry holds a significant position in Indonesia's economy, leading to longstanding government support for the cigarette industry. Consequently, the implementation of an effective tobacco control system and consumer protection measures has been sluggish, reflecting a slower response from the Indonesian government due to the industry's economic importance¹⁴.
6. The cigarette market in Indonesia exhibits distinct characteristics that set it apart from other global markets. Notably, Indonesia has one of the highest smoking prevalence rates worldwide, with an estimated 33.8% of adults and 19.2% of youth in the country being tobacco users. This can be attributed, in part, to the affordability of cigarettes and the relatively low taxes imposed by the government. These factors contribute to the widespread use of tobacco products in Indonesia¹⁵.
7. The significant prevalence of cigarette usage is evident in the average amount of money spent on cigarettes compared to other food items, ranking as the second highest expenditure. According to data provided by the National Statistics (BPS), the average per capita expenditure for the food category is IDR 665.76 thousand per month. Within this amount, public expenditure on cigarettes amounts to IDR 82.18 thousand per capita per month. This value represents 12.34% of the total per capita expenditure per month. When considering different spending categories, public expenditure on tobacco stands as the second largest, surpassed only by the consumption of prepared food and beverages, which amounts to IDR 207.65 thousand per capita per month. Moreover, it exceeds the expenditure on other commodity groups such as grains (Rp 71.44 thousand per capita per

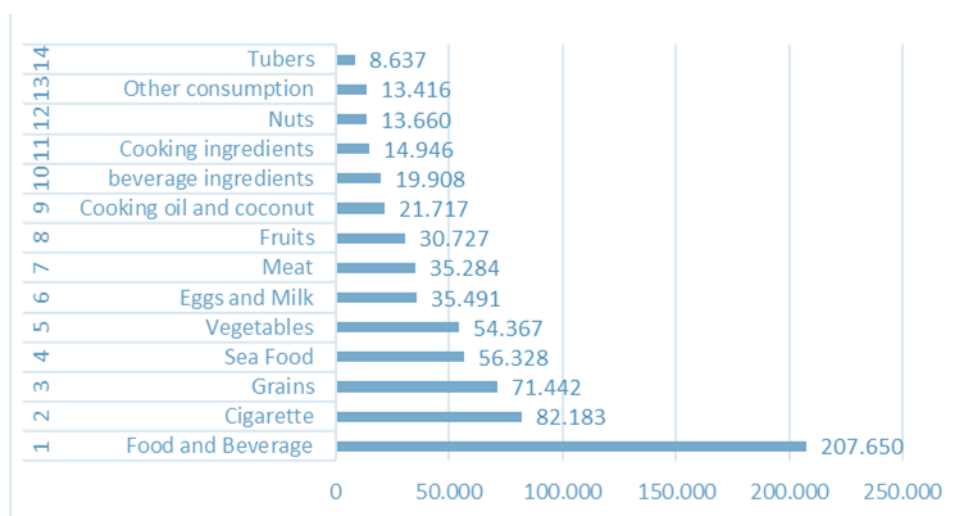
¹³ Tobacco Control Laws (2021), Tobacco Control Policies-Indonesia, retrieved from <https://www.tobaccocontrolaws.org/legislation/policy-fact-sheets/indonesia/summary>

¹⁴ Tobacco industry in Indonesia. (2022, September 19). Statista. <https://www.statista.com/topics/5728/tobacco-industry-in-indonesia/#dossier-chapter6>

¹⁵ Campaign for Tobacco-Free Kids (2021), The toll of Tobacco in Indonesia, retrieved from <https://www.tobaccofreekids.org/problem/toll-global/asia/indonesia>

month) or fish/shrimp/squid/scallop consumption (Rp 56.33 thousand per capita per month)¹⁶.

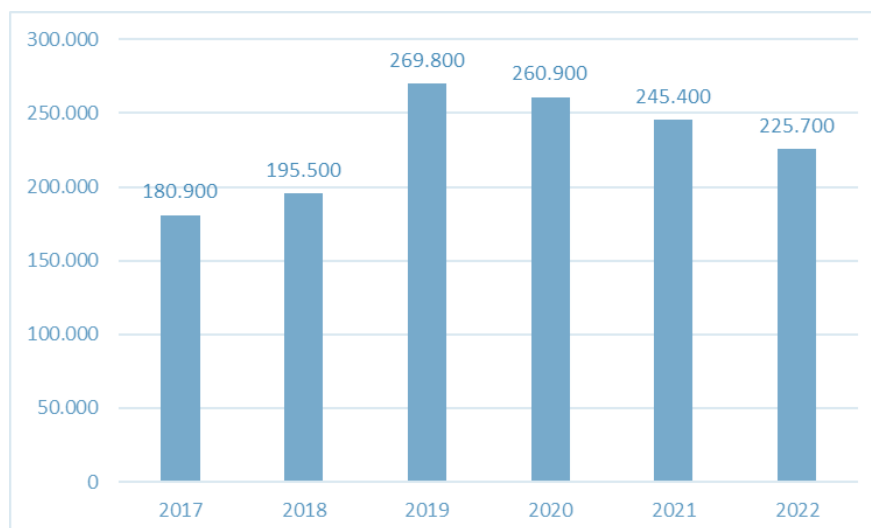
Graph 2: Average value per capita in a month



Source: Databox, Katadata Indonesia (2022)

8. Despite the implementation of certain tobacco control measures by the government, the Indonesian cigarette market continues to offer a diverse array of brands and products. This range encompasses both inexpensive, low-quality cigarettes and premium, high-end options. In 2019, cigarette production in Indonesia reached a record level of 269,800 tonnes. However, this figure declined to 260,900 tonnes in 2020 and further dropped to 225,700 tonnes, indicating a decrease in production in subsequent years¹⁷.

Graph 3: Tobacco Production in Indonesia, 2017-2022



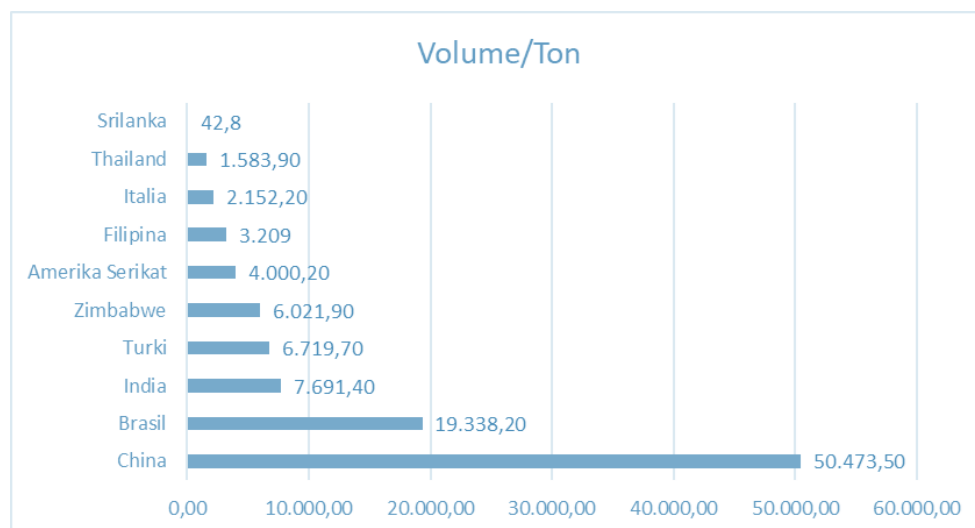
Source: DataIndonesia.id (2023)

¹⁶ Kusnandar V B (2022). Ini Daftar Pengeluaran kelompok Makanan per Kapita Masyarakat, Rokok Nomor Dua Terbesar. Databoks. Katadata Indonesia. Retrieved from <https://databoks.katadata.co.id/datapublish/2022/12/13/ini-daftar-pengeluaran-kelompok-makanan-per-kapita-masyarakat-rokok-nomor-dua-terbesar>

¹⁷ Sadya S (2023). Produksi Tembakau Indonesia Sebanyak 225.700 Ton pada 2022. DataIndonesia.id. Retrieved from <https://dataindonesia.id/sektor-riil/detail/produksi-tembakau-indonesia-sebanyak-225700-ton-pada-2022>

9. The recent decline in tobacco production can be attributed to multiple factors, apart from the weather element, tobacco excise tax increase, another factor is the inadequate supply of local tobacco to meet the demands of the domestic cigarette industry. For instance, from January to August 2020, the need for tobacco by major manufacturers accounted for only 40% of the total production. As a result, the large cigarette industry relies on imported products to fulfil its production requirements, with Virginia, White Burley, and Oriental varieties dominating the imported tobacco market¹⁸.
10. According to the Indonesian Statistics data, the total volume of national tobacco imports is projected to reach 116.93 thousand tons in 2021, reflecting a 6.03% increase compared to the previous year's figure of 110.27 thousand tons. Among the countries exporting tobacco to Indonesia, China stands out as the largest tobacco importer in 2021, with a volume of 50.47 thousand tons. Brazil takes the second spot with 19.33 thousand tons, followed by India with a total of 7.69 thousand tons. In addition to these countries, Indonesia also imports tobacco from Turkey, Zimbabwe, the United States, the Philippines, Italy, and Thailand, contributing to a total tobacco import value of USD 586.68 million in 2021. This value represents an increase from the previous year's total of USD 550.41 million¹⁹.

Graph 4: Ten Largest Tobacco Importing Countries to Indonesia (2021)



Source: Databoks Katadata (2022)

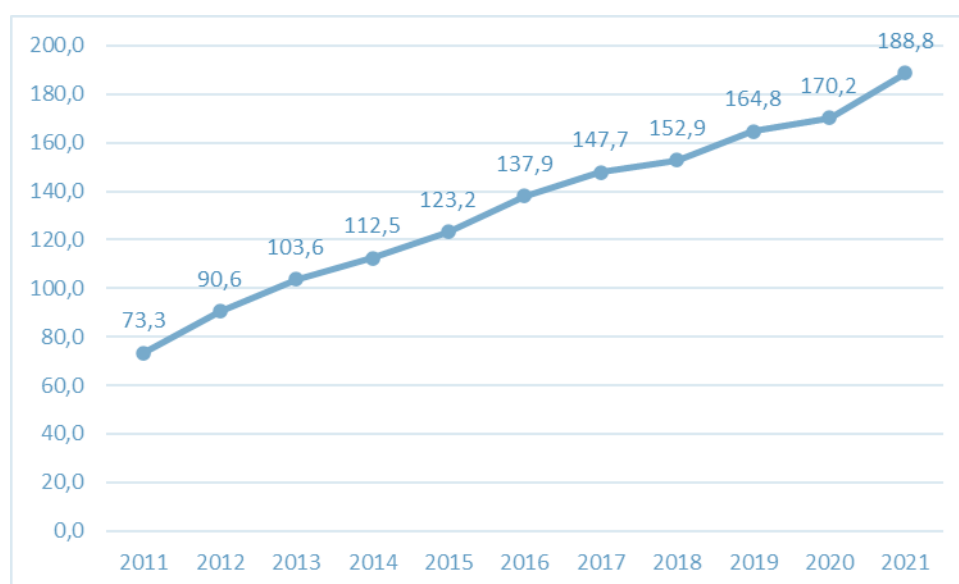
11. The government has experienced a significant rise in revenue through tobacco excise, with an accumulated increase of 157% from 2011 to 2021, equivalent to 2.5 times the initial amount. Back in 2011, excise revenue from tobacco products amounted to only around IDR 73.3 trillion. However, by 2021, this figure had surged to IDR 188.8 trillion. Minister of Finance

¹⁸ Arief A M (2020). Produksi Tembakau 2020 Diramalkan Susut, Ini Penyebabnya. Business.com. Business Indonesia. Retrieved from <https://ekonomi.bisnis.com/read/20200918/257/1293158/produksi-tembakau-2020-diramalkan-susut-ini-penyebabnya>

¹⁹ Annur C M (2022). Impor Tembakau RI Naik Jadi 116 Ribu Ton pada 2021. Databoks. KataData.id. Retrieved from <https://databoks.katadata.co.id/datapublish/2022/03/06/impor-tembakau-ri-naik-jadi-116-ribu-ton-pada-2021>

Sri Mulyani emphasizes that the purpose of increasing cigarette tax excise is not solely to generate state revenues, but also to reduce the prevalence of smoking and enhance public health outcomes.

Graph 5: Tobacco Excise Tax Revenue (2011-2021)



Source: Databoks, Katadata.co.id (2022)

Market Structure and Characteristics of e-Cigarette

12. Until recently, the e-cigarette market in Indonesia had remained largely unregulated. The only existing regulation pertaining to e-cigarettes was the imposition of a 57% excise tax specifically on e-cigarette liquid^{20 21}. However, in a recent development, the government has raised the excise tax rate to 15% for e-cigarettes, effective for the years 2023 and 2024²². This regulatory landscape has resulted in relatively few barriers to entry for new companies and brands in the market. Consequently, a significant number of small-scale producers and e-cigarette retailers have emerged, including illicit products that are readily available in black markets and online shops²³.

²⁰ Soerojo W, Bigwanto M, Susilo D, Wiyono N H (2020). Fakta Tembakau Indonesia 2020. IAKMI. ISBN: 978-602-50922-6-8

²¹ Jin P, Jiang JY (2017), E-cigarettes in ten Southeast Asian Countries: a comparison of national regulations. Glob Health Journal; 1(3):1–10. doi: 10.1016/S2414-6447(19)30097-1

²² Herman. (2023, January 17). Equally Bad as Regular Cigs: Gov't Told to Get Tough on Vapes. JakartaGlobe.id. Retrieved May 3, 2023, from <https://jakartaglobe.id/news/equally-bad-as-regular-cigs-govt-told-to-get-tough-on-vapes>

²³ Kurniawan, A. (2022). Potensi Besar Pendatang Baru, Industri Rokok Elektrik Butuh Dukungan. SINDOnews.com. <https://ekbis.sindonews.com/read/854573/34/potensi-besar-pendatang-baru-industri-rokok-elektrik-butuh-dukungan-1660320487>

13. Despite the growing popularity of electronic cigarettes, their market presence in Indonesia remains significantly smaller compared to combustible cigarettes^{24 25 26}. As a result, the major domestic tobacco sector has not yet ventured into producing electronic cigarettes. This sheds light on the negative comments and reservations expressed by the industry regarding e-cigarettes. While some tobacco businesses perceive e-cigarettes as a potential existential threat, others view them as an opportunity. Nonetheless, certain tobacco companies continue to provide financial support to e-cigarette manufacturers and distributors, reflecting their varying perspectives on the market potential of electronic cigarettes²⁷.
14. The e-cigarette market in Indonesia was significantly shaped by cultural factors. Smoking, in general, is widely accepted within Indonesian society²⁸, which had an impact on the perception and acceptance of e-cigarettes. Furthermore, e-cigarettes were often marketed as a potentially healthier alternative to traditional smoking. This messaging influenced consumer attitudes and behaviours. Additionally, a subculture of e-cigarette enthusiasts emerged, comprising individuals who were passionate about exploring various product types and flavours. This subculture contributed to the growth and diversification of the e-cigarette market in Indonesia²⁹.
15. The lack of comprehensive regulation in the e-cigarette market in Indonesia has facilitated the entry of numerous new brands, leading to concerns regarding product safety and quality. This situation poses potential dangers for consumers^{30 31}. Additionally, the market has witnessed the widespread availability of illegal e-cigarette products³², and drug-laced vape liquid³³. Despite these challenges, the e-cigarette market in Indonesia remains substantial and exhibits rapid growth. Both domestic and international players have established a significant presence in the market, contributing to its expansion³⁴.
16. E-cigarette products in Indonesia were predominantly sold through specialty shops, catering specifically to the vaping community. However, they were also available in select convenience stores and through online retailers. The market offered a diverse range of e-

²⁴ Bigwanto M, Nurmansyah MI, Orlan E, Farradika Y, Purnama TB (2019). Determinants of e-cigarette use among a sample of high school students in Jakarta, Indonesia. *Int J Adolesc Med Health*;34(3):20190172. doi: 10.1515/ijamh-2019-0172

²⁵ Fauzi R, Areesantichai C. (2022), Factors associated with electronic cigarettes use among adolescents in Jakarta. *Indones J Health Res*;36(1):2–11. doi: 10.1108/JHR-01-2020-0008

²⁶ National Institute for Health Research and Development- National Health Indicators Survey (SIRKESNAS) (2016). Jakarta: Ministry of Health Republic of Indonesia.

²⁷ Bigwanto, M., Arumsari, I., & Fauzi, R. (2022). Electronic Cigarette Portrayal in Indonesia: A Content Analysis of News Media. *Research Square (Research Square)*. <https://doi.org/10.21203/rs.3.rs-1761838/v2>

²⁸ Astuti, P. a. S., Assunta, M., & Freeman, B. (2020). *Why is tobacco control progress in Indonesia stalled? - a qualitative analysis of interviews with tobacco control experts*. *BMC Public Health*, 20(1). <https://doi.org/10.1186/s12889-020-08640-6>

²⁹ Bigwanto M, Nurmansyah MI, Orlan E, Farradika Y, Purnama TB (2019). Determinants of e-cigarette use among a sample of high school students in Jakarta, Indonesia. *Int J Adolesc Med Health*;34(3):20190172. doi: 10.1515/ijamh-2019-0172

³⁰ Bigwanto M (2019), *The challenges of e-cigarette regulation in Indonesia*, *De Gruyter Conversations*. <https://blog.degruyter.com/challenges-e-cigarette-regulation-indonesia/>

³¹ Universitas Indonesia, Medical School (2022) *Vape Tak Lebih Aman dari Rokok Konvensional, Apa Saja Bahaya Vape Rokok?*, Info Sehat FKUI, Retrieved from <https://fk.ui.ac.id/infosehat/vape-tak-lebih-aman-dari-rokok-konvensional-apa-saja-bahaya-vape-rokok/>

³² Directorate General of Custom (2022). Media Center: Ini Upaya Bea Cukai Berantas Peredaran Rokok Elektrik Ilegal. The Ministry of Finance RI

³³ *Jakarta Globe* (2023). *Meth-Infused Vape Liquid Home Industry Sparks Concern over E-Cigs*. *Jakarta Globe*. Retrieved from <https://jakartaglobe.id/news/methinfused-vape-liquid-home-industry-sparks-concern-over-ecigs>

³⁴ Song Y, Zhao A (2023), *Chinese e-cigarette manufacturers are expanding into Indonesia to better serve export markets*, *Into Indonesia. Tobacco Reporter*, Retrieved from <https://tobaccoreporter.com/2023/01/02/into-indonesia/>

cigarette products, encompassing everything from basic starter kits designed for beginners to more advanced mods and tanks that appealed to experienced vapers. This wide variety of options provided consumers with the flexibility to choose products that suited their preferences and level of expertise in vaping.

17. The popularity of e-cigarette products in Indonesia can be attributed to several influential factors. One key factor is the growing consumer preference for safer alternatives to traditional tobacco smoking³⁵. Additionally, the incessant online promotion of e-cigarette products has played a significant role in increasing their popularity. The relatively low production cost in Indonesia has also made the country an attractive location for both domestic and international manufacturers of e-cigarette products³⁶ ³⁷. Furthermore, Indonesia has a substantial population of smokers, and e-cigarette products are often marketed as a healthier alternative to traditional smoking, which further contributes to their appeal and popularity.

Market Structure and Characteristics of Heated Tobacco Products

18. The market for heated tobacco products (HTPs) in Indonesia is still in its nascent stages. However, these products have gained popularity in Indonesia due to several factors. The country has a high smoking rate, and many smokers are looking for alternative options to traditional cigarettes. HTPs offer a potentially less harmful alternative, as they produce fewer toxicants compared to conventional cigarettes.
19. The regulatory environment surrounding heated tobacco products in Indonesia has been evolving, the Indonesian government has been considering introducing specific regulations for HTPs to ensure consumer safety and control their marketing and distribution. However, since the introduction of the 2018 excise tax, which legalized HTPs, there has been a notable increase in their sales and overall market growth in Indonesia. As of 2021, Indonesia ranked 6th among other Southeast Asian countries in terms of the number of HTP stick sales. It is worth noting that Southeast Asia serves as a significant regional market for HTPs³⁸.
20. With relatively few products available and limited consumer awareness, several global tobacco companies have introduced their products in the Indonesian market. The dominant HTPs brand in the Indonesian market is Iqos by PMI, followed by other brands with limited distribution channels such as PloomTech by JTI, iFuse and Glo by BAT³⁹.
21. The perception of heated tobacco products among Indonesian consumers varies. Some smokers perceive HTPs as a less harmful alternative to cigarettes and are willing to try them. However, there is still a need for public education and awareness campaigns to ensure consumers understand the potential risks and benefits of these products.
22. While heated tobacco products are marketed as potentially reduced-risk alternatives to smoking, there are ongoing debates among health experts regarding their long-term health

³⁵ Bonafide Research & Marketing (2022), *Indonesia E-Cigarette Market Overview 2028*, Market Research.com, retrieved from

³⁶ Bigwanto M, Ramadhan FA, Wijayanto XA (2022), *Online e-cigarette promotion in Indonesia*. *Tob Control*. (Ahead of Print):1–4. <https://doi.org/10.1136/tc-2022-057568>

³⁷ Harera M M (2022), *Indonesia Will Become The Largest Consumer Of E-Cigarettes In Southeast Asia? Let's Check The Facts*, VOI, retrieved from <https://voi.id/en/news/192493>

³⁸ Alebshehy R (2023). Heated Tobacco Products. Tobacco Control Research Group. The University of Bath. Retrieved from <https://tobaccotactics.org/article/heated-tobacco-products/>

³⁹ Alebshehy R (2023). Heated Tobacco Products. Tobacco Control Research Group. The University of Bath. Retrieved from <https://tobaccotactics.org/article/heated-tobacco-products/>

effects. The Indonesian government and public health organizations need to closely monitor the impact of these products on public health and develop evidence-based policies accordingly.

23. In light of the pros and cons associated with HTPs, the Indonesian government has advised fostering collaborative research on alternative tobacco products, engaging various stakeholders including academics, government institutions, and industry representatives. The objective is to present smokers who encounter challenges in quitting with a safer substitute and encourage their transition to this particular product⁴⁰.

Health and Economic Costs of the Cigarette, E-cigarette, and Heated Tobacco Products

Tobacco use in Indonesia has significant health and economic costs, impacting both individuals and the nation as a whole. The key points regarding the health costs associated with tobacco use in Indonesia include:

24. High Prevalence of Smoking: Indonesia has one of the highest smoking rates in the world, with a significant portion of the population being regular smokers. This prevalence leads to widespread health consequences. are measured by three main categories of tobacco-related diseases: morbidity, disability, and mortality⁴¹. According to a 2015 study, 925,611 males (93.27%) and 66,719 females (6.93%) were hospitalised in Indonesia as a result of smoking-related diseases such as hypertension (42.6%), chronic obstructive pulmonary disease (COPD) (40.2%), and stroke other diseases (12%), accounting for 21.05 per cent of all chronic diseases in the country⁴².
25. Smoking-related morbidity accounts for more than 21% of all chronic illness cases in Indonesia⁴³. Other smoking-attributable diseases, such as a cerebrovascular attack, ischemic heart disease, and chronic obstructive pulmonary disease (COPD), are also top causes of mortality in Indonesia. Between 2007 and 2017, the death rates for these disorders grew by 29.2%, 29.0%, and 10.5%, respectively⁴⁴. Similarly, the Global Burden of Disease (GBD) indicates that tobacco is responsible for 59.6% of deaths from tracheal, bronchus, and lung cancer, 59.3% of deaths from chronic obstructive pulmonary disease, 28.6% of deaths from ischemic heart disease, 20.6% of deaths from diabetes, and 19.9% of deaths from stroke.
26. Non-smokers exposed to second-hand smoke are also at risk of developing similar health problems, including respiratory issues, cardiovascular diseases, and lung cancer. Children, in particular, are vulnerable to the harmful effects of second-hand smoke. The University of

⁴⁰ Widya A (2022). Indonesia Needs More Research on Alternative Tobacco Products. Viva News. Viva.co.id. Retrieved from <https://www.viva.co.id/english/1525339-indonesia-needs-more-research-on-alternative-tobacco-products>

⁴¹ Kosen S, Thabrany H, Kusumawardani N, Martini S (2017). Health and Economic Costs of Tobacco in Indonesia : Review of Evidence Series. Lembaga Penerbit Badan Penelitian dan Pengembangan Kesehatan (LPB), Ministry of Health

⁴² Kristina SA, Endarti D, Wiedyaningsih C, Fahamsya A, Faizah N. (2015) Health Care Cost of Noncommunicable Diseases Related to Smoking in Indonesia. *Asia-Pacific J Public Healh*. 2018; 30: 29–35.

<https://doi.org/10.1177/1010539517751311> PMID: 29292653

⁴³ Zheng R, Patricio VM, Abdillah A; Wang Y, Hu X. (2018). Cigarette affordability in Indonesia : 2002 – 2017. WBG Global Tobacco Control Program. Washington, D.C. : World Bank Group. Retrieved from

<http://documents.worldbank.org/curated/en/486661527230462156/Cigarette-affordability-in-Indonesia-2002-2017>

⁴⁴ IHME (Institute for Health Metrics and Evaluation) (2017). Indonesia Country Profile. In: Seattle: Institute for Health Metrics and Evaluation [Internet]. Retrieved from: <http://www.healthdata.org/indonesia>

Indonesia Social Security Study Centre (PKJS-UI) conducted a study that uncovered a significant link between cigarette consumption and poverty as well as stunting in Indonesia. This research utilized longitudinal data from the Indonesian Family Life Survey (IFLS) spanning from 1997 to 2014, providing concrete evidence of the influence of smoking behaviour on the stunting of children within families, as indicated by a decrease in height and weight⁴⁵.

27. The 2021 Global Adult Tobacco Survey (GATS) data revealed that approximately 44.8% of adults, which amounts to 20.3 million adults, encountered tobacco smoke in enclosed areas where they worked. Additionally, around 59.3% of adults, equivalent to 121.6 million adults, experienced tobacco smoke exposure within their own homes. Moreover, approximately 74.2% of adults, totalling 56.1 million adults, were exposed to tobacco smoke while visiting restaurants⁴⁶.
28. The detrimental impact of smoking on the economy is manifested in multiple ways, including indirect costs such as the loss of life and productive years, as well as direct costs, the financial burden on the healthcare system, including expenses for hospitalization, medication, surgeries, and long-term care. These costs strain public health resources and individual finances. According to a Center for Indonesia's Strategic Development Initiatives (CISDI) study, the economic impact of cigarette consumption in Indonesia resulted in direct health costs ranging from IDR 17.9 to 27.7 trillion in 2019. CISDI further highlights that a significant portion of the health economic burden stems from the costs of hospitalization and treatment, which are to be borne by the national health system⁴⁷.
29. According to a study conducted in 2019, the economic burden of smoking-related diseases of the entire Indonesian population was found to be between Rp 184.36 trillion and Rp 410.76 trillion depending on the assumed Relative Risk (RR) used. Since there is no available RR specifically for Indonesia, the study utilized RRs from India and the USA. Furthermore, the study revealed that the national health system covers the majority of this cost, ranging from 56.3% to 58.6%.⁴⁸
30. The national health system in Indonesia is facing a significant financial challenge due to tobacco-related diseases, which experts refer to as a funding black hole. This deficit is attributed to the fact that the top three causes of death and disability in Indonesia, namely stroke, ischemic heart disease, and diabetes, are all linked to tobacco use⁴⁹. As a result, the treatment of tobacco-related diseases has substantially raised the claims ratio, putting further strain on the health system's resources⁵⁰.
31. A statement issued by the World Health Organization (WHO) regarding the implementation of higher tobacco taxes and prices in Indonesia affirmed that the considerable levels of

⁴⁵ P2PTM Kemenkes RI (2018). Konsumsi Rokok Akibatkan Anak Stunting. The Ministry of Health. Retrieved from <https://p2ptm.kemkes.go.id/kegiatan-p2ptm/pusat-/konsumsi-rokok-akibatkan-anak-stunting>.

⁴⁶ Global Adult Tobacco Survey (2022). Fact Sheet Indonesia 2021, the World Health Organization (WHO). Retrieved from https://cdn.who.int/media/docs/default-source/ncds/ncd-surveillance/data-reporting/indonesia/indonesia-national-2021-factsheet.pdf?sfvrsn=53eac4fd_1

⁴⁷ Sebayang, A A (2022). 3 Riset Ini Jadi Acuan Menteri Keuangan Menaikkan Cukai Rokok. Center for Indonesia's Strategic Development Initiatives (CISDI). Jakarta

⁴⁸ Meilissa, Y., Nugroho, D., Luntungan, N. N., & Dartanto, T. (2022). The 2019 economic cost of smoking- attributable diseases in Indonesia. *BMJ Journal*, 31(s133). Retrieved from <https://doi.org/10.1136/tobaccocontrol-2021-056890>

⁴⁹ IHME (Institute for Health Metrics and Evaluation) (2017). Indonesia Country Profile. In: Seattle: Institute for Health Metrics and Evaluation [Internet]. Retrieved from: <http://www.healthdata.org/indonesia>

⁵⁰ Prabhakaran S., A. Dutta, T. Fagan, and M. Ginivan. (2019). Financial Sustainability of Indonesia's Jaminan kesehatan Nasional: Performance, Prospects, and Policy Options. Washington, DC: Palladium, Health Policy Plus, and Jakarta, Indonesia: Tim Nasional Percepatan Penanggulangan Kemiskinan (TNP2K).

tobacco consumption have adverse effects on the resources necessary for Indonesia's economic advancement. This impact occurs in two main ways: firstly, the escalated demand for healthcare services related to noncommunicable diseases places a substantial financial burden on both the nation and individuals, hindering economic growth. Secondly, the premature illnesses and deaths resulting from tobacco usage directly diminish workforce productivity by causing absenteeism and decreased output. Consequently, the WHO offers crucial suggestions for reducing tobacco use in Indonesia through fiscal measures⁵¹

32. To date, comprehensive research examining the health and economic repercussions of electronic cigarettes and HTPs use in Indonesia remains scarce. However, Based on numerous proponents' studies that highlight the advantages of using tobacco harm-reduction products over traditional combustible cigarettes, it can be inferred that the use of HTPs is expected to incur lower health and economic costs compared to combustible cigarettes.
33. A study conducted on the content of harmful and potentially harmful constituents (HPHCs) of the HTPs indicates that by eliminating the combustion process in heat-not-burn tobacco products (HTPs), the levels of chemical compounds known to pose health risks decreased by up to 90% when compared to the harmful constituents produced by combustible cigarettes⁵². Similarly, a study on the impact of electronic cigarettes and HTPs on Chronic obstructive pulmonary disease (COPD) patients' health concluded that most of the smokers with COPD were unable to experience high success rates during their quit-smoking attempts. With a greater degree of nicotine dependence, these patients had poor motivation to quit smoking⁵³. Switching to an alternative harm-reduction strategy of substituting conventional cigarettes with consumer products that do not require combustion to deliver nicotine was recommended because these products may reverse some of the harm caused by cigarette smoking in COPD patients,⁵⁴ hence it reduces the cost of medications and other health and economic related costs.
34. A scientific investigation conducted in Japan analyzed the rates of hospitalization for two severe health conditions, namely Chronic Obstructive Pulmonary Disease (COPD) and Ischemic Heart Disease (IHD), spanning from 2013 to 2020. The study discovered a significant decrease in hospitalizations related to these diseases following the introduction of heated tobacco products (HTPs) into the market. Despite the study's limitations, such as the exclusion of legislative and policy changes and its association with a proponent of harm-reduction products. Nevertheless, these findings suggest that HTPs, when used as an alternative to traditional cigarettes by adult smokers grappling with addiction, may yield positive effects on public health⁵⁵ and potentially contribute to a decline in cigarette sales

⁵¹ World Health Organization: WHO. (2020). WHO statement: a healthy and prosperous Indonesia through raised tobacco taxes and prices. WHO. Retrieved from <https://www.who.int/indonesia/news/detail/09-10-2020-who-statement-a-healthy-and-prosperous-indonesia-through-raised-tobacco-taxes-and-prices>

⁵² Schaller, J., Pijnenburg, J. P. M., Ajithkumar, A., & Tricker, A. R. (2016). Evaluation of the Tobacco Heating System 2.2. Part 3: Influence of the tobacco blend on the formation of harmful and potentially harmful constituents of the Tobacco Heating System 2.2 aerosol. *Regulatory Toxicology and Pharmacology*, 81, S48–S58. Retrieved from <https://doi.org/10.1016/j.yrtph.2016.10.016>

⁵³ Hoogendoorn M, Feenstra TL, Hoogenveen RT, et al. (2010) Long-term effectiveness and cost-effectiveness of smoking cessation interventions in patients with COPD. *Thorax*. 65(8):711–718.

⁵⁴ Polosa R, Morjaria JB, Prosperini U, et al. (2021) Health outcomes in COPD smokers using heated tobacco products: a 3-year follow-up. *Intern Emerg Med*. 16(3):687–696

⁵⁵ PMI. (2022) research suggests potential positive public health impact of introducing smoke-free products. [www.linkedin.com. Retrieved from https://www.linkedin.com/pulse/2022-research-suggests-potential-positive-public-health-impact/?trk=organization_guest_main-feed-card_feed-article-content](https://www.linkedin.com/pulse/2022-research-suggests-potential-positive-public-health-impact/?trk=organization_guest_main-feed-card_feed-article-content)

within Japan⁵⁶. Based on the findings of these studies, it can be inferred that heated tobacco products, when used as substitutes for combustible cigarettes, potentially have a lesser impact on both health and the economy.

35. These health and economic costs highlight the importance of tobacco control measures, including public awareness campaigns, tobacco taxation, tobacco tax tier system, smoke-free policies, and access to cessation programs. By reducing cigarette use, Indonesia can alleviate the burden on healthcare systems, improve public health outcomes, and mitigate economic losses associated with tobacco-related illnesses.

An analysis of current policies on tobacco control, cessation and THR

36. Tobacco excise tax; One of the methods employed by the country to regulate tobacco consumption is the imposition of tobacco excise taxes. The government has recently made the decision to raise cigarette excise taxes by 10 per cent for the years 2023 and 2024⁵⁷, and the World Health Organization (WHO) asserts that increasing tobacco excise taxes and prices is the most powerful and economically efficient strategy for decreasing tobacco usage⁵⁸. The objective of implementing a higher cigarette excise policy includes: (1) diminishing the rate of smoking among individuals aged 10-18 by the year 2024, (2) curbing the production of cigarettes, (3) discouraging consumers from switching to cheaper cigarettes brands, (4) preventing cigarette manufacturers from benefiting from reduced excise taxes, and (5) enhancing the potential for generating state revenue⁵⁹.

The writers' comment:

The effectiveness of reducing smoking cessation can be enhanced by implementing a strategy that involves increasing the tobacco tax and simplifying the tobacco excise system through the elimination of production tiers, thereby implementing a uniform-specific tax.

To effectively curb cigarette consumption, tax increases should exceed the general rate of inflation and be substantial enough to counterbalance income growth.

Given the substantial impact of tobacco-related diseases, it is necessary to implement the highest permissible excise tax rate on all cigarette goods in order to counteract the growing affordability of cigarettes. Conversely, tobacco harm reduction products, which are recognized as posing lesser health risks, should be subject to lower taxes compared to traditional combustible cigarettes.

The regulation of increasing tobacco tax seems to only target children aged 10-18 and disregards adult active smokers. Data showed that there has been no observable decrease

⁵⁶ Cummings, K. M., Nahhas, G. J., & Sweanor, D. T. (2020). What Is Accounting for the Rapid Decline in Cigarette Sales in Japan? *International Journal of Environmental Research and Public Health*, 17(10), 3570. MDPI AG. Retrieved from <http://dx.doi.org/10.3390/ijerph17103570>

⁵⁷ Office of Assistant to Deputy Cabinet Secretary for State Documents & Translation (2022). Gov't to Increase Tobacco Excise Starting Next Year. Cabinet Secretariat of the Republic of Indonesia. Retrieved from <https://setkab.go.id/en/govt-to-increase-tobacco-excise-starting-next-year/>

⁵⁸ World Health Organization (WHO). Raising taxes on tobacco. WHO. Retrieved from <https://www.who.int/activities/raising-taxes-on-tobacco>

⁵⁹ Sebayang A A (2022). 3 Riset Ini Jadi Acuan Menteri Keuangan Meningkatkan Cukai Rokok. CISDI. Retrieved from <https://cisdi.org/artikel/3-riset-ini-jadi-acuan-menteri-keuangan-menaikkan-cukai-rokok>

in the prevalence of smoking among adults during the 5 years spanning from 2013 to 2018⁶⁰. According to the 2021 Global Adult Tobacco Survey (GATS) data, the number of adult active smokers has surged by 8.8 million people over the past decade, with the count escalating from 60.3 million in 2011 to a staggering 69.1 million smokers in 2021⁶¹.

This suggests that it is necessary to develop a more effective strategy to tackle smoking rates among this specific age group. By doing so, it will be possible to reduce the health and economic burdens associated with tobacco use among this vulnerable population.

37. Alternative smoking cessation strategy; Indonesia bears a substantial weight of tobacco-related challenges, experiencing nearly two million instances of tobacco-related diseases and over two hundred thousand deaths attributed to tobacco each year. In order to address these concerns, the government has been actively engaged in enacting smoke-free regulations and implementing partial bans on tobacco advertising, as well as introducing health warnings with pictures on cigarette packaging. Additionally, efforts have been made to raise tobacco taxes and enforce various other measures for tobacco control, both at the national and sub-national levels. To effectively accomplish these tobacco control policies, it is imperative for smokers to prioritize quitting smoking. However, data released by the WHO Global Adult Tobacco Survey in 2019 revealed that Indonesia was among the least countries whose smokers have the intention to quit, after Pakistan, China and Egypt⁶². According to a study conducted on smoker patients with chronic obstructive pulmonary disease (COPD), it was found that these individuals do not exhibit a favourable response to interventions aimed at helping them quit smoking. Surprisingly, many COPD patients persist in smoking despite experiencing symptoms associated with their condition. This behaviour can be attributed to the addictive nature of cigarettes, which results from prolonged exposure to tobacco⁶³

The writers' comment:

Considering the challenging circumstances that make it difficult for active adult smokers to quit, even in cases of COPD⁶⁴, it is advisable for tobacco control initiatives to incorporate a harm reduction strategy as a substitute for tobacco cigarettes to mitigate the potential harm associated with using cigarettes. Efforts should be directed towards implementing measures that aim to minimize the adverse effects.

38. institutional barriers: Indonesia is administratively divided into provinces and districts/cities. Following the decentralization policy introduced in 1999 [20], these sub-

⁶⁰ World Health Organization (WHO) (2020). WHO Statement: Hari Tanpa Tembakau Sedunia 2020. WHO. Retrieved from <https://www.who.int/indonesia/news/detail/30-05-2020-pernyataan-hari-tanpa-tembakau-sedunia-2020>

⁶¹ Ripsidasiona (2022). Perokok Dewasa di Indonesia Meningkat Dalam Sepuluh Tahun Terakhir. Humas BKKP, Ministry of Health. Retrieved from <https://www.badankebijakan.kemkes.go.id/perokok-dewasa-di-indonesia-meningkat-dalam-sepuluh-tahun-terakhir/#:~:text=Hasil%20Global%20Adult%20Tobacco%20Survey,%25%20menjadi%201%2C6%25>.

⁶² World Health Organization (WHO) (2019). WHO Report on the Global Tobacco Epidemic 2019; Offer Help to Quit Tobacco Use. WHO. Retrieved from file:///C:/Users/Lazuardi/Downloads/9789241516204-eng%20(3).pdf

⁶³ Jaymin B. Morjaria, Davide Campagna, Grazia Caci, Renee O'Leary & Riccardo Polosa (2022) Health impact of e-cigarettes and heated tobacco products in chronic obstructive pulmonary disease: current and emerging evidence, *Expert Review of Respiratory Medicine*, 16:11-12, 1213-1226, DOI: 10.1080/17476348.2023.2167716

⁶⁴ Polosa R, Morjaria JB, Prosperini U, et al. (2021) Health outcomes in COPD smokers using heated tobacco products: a 3-year follow-up. *Intern Emerg Med*. 16(3):687–696

national governments have acquired substantial autonomy within their respective areas⁶⁵. Policy formulation is now occurring not only at the national level but also at the sub-national/provincial and district/city levels. As part of the decentralization process, certain responsibilities regarding tobacco control policy were assigned to the sub-national level⁶⁶, aligning with the logic behind government decentralization. The existing regulation also stipulates that specific government agencies are responsible for implementing different aspects of the policy.

The writers' comment:

The intricate bureaucracy and lack of coordination, along with ambiguous authority and responsibilities among stakeholders, Ministries, and other government entities, have resulted in potential delays in effectively implementing tobacco control policies. Moreover, achieving coordination among the national, provincial, and district/city levels is a challenging task. The need to synchronize district regulations with provincial governments further adds complexity to the policy-making process.

The current Ministry of Health (MoH), which is the main advocate for tobacco control, faces a lack of leadership and often encounters resistance from other Ministries. The support from other government entities is limited, with notable backing from the Ministry of Women Empowerment and Child Protection (MWECP). On the contrary, there is active opposition within the government, particularly from ministries directly involved in the tobacco industry, such as the Ministry of Industry, Ministry of Trade, and Ministry of Agriculture. The MoH encounters challenges in negotiating tobacco control measures with these influential ministries. The MoH's political position is weakened as it is perceived as a spender of the national budget, while the other powerful ministries are seen as income generators.

TOBACCO EXCISE TAX AND REGULATION

39. Excise tax on Tobacco Products is governed by Minister of Finance regulation Number 109/PMK.010/2022, which serves as an amendment to regulation number 192/PMK.010/2021. This regulation establishes the retail selling prices (HJE) and excise rates for both locally produced and imported tobacco products, such as cigarettes, cigars, cigarette leaves (Klobot), and sliced tobacco. Additionally, the regulation provides a classification system for production within the tobacco industry⁶⁷.
40. Following the previous regulation, number 192/PMK.010/2021, the government issued regulation number 191/PMK/2022 in January 2023, which specifically regulates the excise rates and retail selling prices (HJE) for cigarettes. This regulation establishes guidelines for adjusting the excise rates increase by 10% and retail selling prices of cigarettes for the years 2023 and 2024⁶⁸. As per the statements of the Minister of Finance, the average excise tax increase of 10% applied to machine-rolled kretek cigarettes (SKM) of classes 1 and 2,

⁶⁵ Majelis Permusyawaratan Rakyat Republik Indonesia (1998) Ketetapan Majelis Permusyawaratan Rakyat Republik Indonesia Nomor XV/MPR/1998 Tahun 1998. Jakarta: Majelis Permusyawaratan Rakyat Republik Indonesia. Retrieved from <https://jdihn.go.id/files/4/1998tapmprXV.pdf>

⁶⁶ Pemerintah Republik Indonesia (2010). Peraturan Pemerintah Republik Indonesia no 109 Tahun 2012 tentang Pengamanan Bahan Yang Mengandung Zat Adiktif Berupa Produk Tembakau di Indonesia. Jakarta: Pemerintah Republik Indonesia.

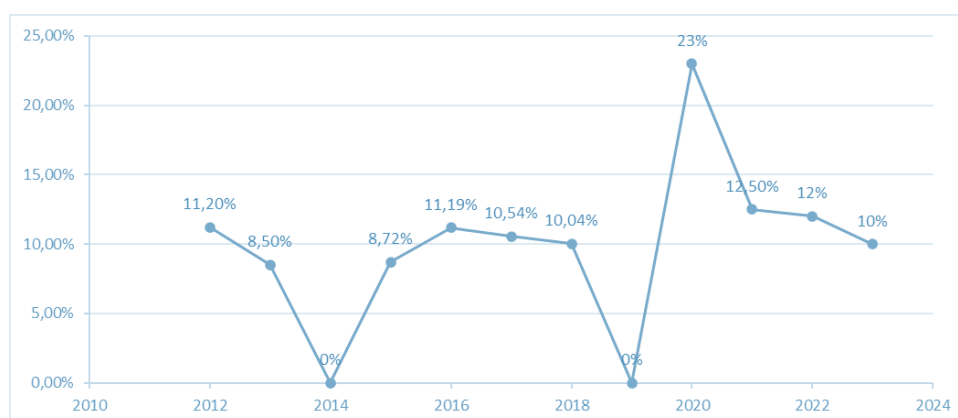
⁶⁷ Regulation of the Minister of Finance 109/PMK. 010/2022. The Ministry of Finance

⁶⁸ Regulation of the Minister of Finance 191/PMK. 010/2022. The Ministry of Finance

resulting in an average increase ranging between 11.5 and 11.75%. Similarly, machine-rolled white cigarettes (SPM) of classes 1 and 2 are expected to increase by 11-12%, while hand-rolled cigarettes (SKT) of classes 1, 2, and 3 will see a 5% hike⁶⁹.

41. The recent hike in cigarette excise tax is not an isolated incident in Indonesia. In fact, in 2022 alone, excise rates witnessed a 12% surge, and over the past decade, the country has experienced an average annual increase of 10.8% in cigarette excise. The decision to raise excise rates has generated both proponents and opponents, but it aligns with the government's commitment outlined in the 2020-2024 National Medium-Term Development Plan (RPJMN), specifically aimed at reducing smoking prevalence among children and youth. The graph below illustrates the average increase in cigarette excise rates in Indonesia over time.

Graph 6: Tobacco Excise Tax average increase



Source: Goodstats.id (2022)

42. Indonesia is implementing a multi-tiered tobacco tax system. The tax system initially comprise 19 tiers. However, in line with the Ministry of Finance's strategic plan, the government subsequently streamlined this tax tier system, reducing it to 10 tiers in 2019 and further to 8 tiers in 2022⁷⁰. The Minister of Finance emphasized the consolidation of the cigarette tax tier system by merging Sigaret Kretek Mesin (SKM) groups IIA and IIB, along with Sigaret Putih Mesin (SPM) groups IIA and IIB⁷¹.
43. The regulations governing cigarette use encompass various aspects. The joint regulation of the Minister of Health and Minister of Home Affairs No. 188/MENKES/PB/I/2011 pertains to smoking-free areas⁷². The advertisement of cigarettes is regulated by Law No. 32/2002, which imposes restrictions on cigarette advertisements⁷³, and Government Regulation No.

⁶⁹ Office of Assistant to Deputy Cabinet Secretary for State Documents & Translation (2022). Gov't to Increase Tobacco Excise Starting Next Year. Cabinet Secretariat of the Republic of Indonesia

⁷⁰ P2PTM Kemenkes RI (2022). Cukai Rokok 2022 Sudah Naik, Apa Dampaknya?. The Ministry of Health. Retrieved from <https://p2ptm.kemkes.go.id/tag/cukai-rokok-2022-sudah-naik-apa-dampaknya>

⁷¹ DDTCTNews (2021). Berlaku 1 Januari 2022! Tarif Cukai Rokok Naik, Jumlah Layer berkurang. Redaksi DDTCTNews. Retrieved from <https://news.ddtc.co.id/berlaku-1-januari-2022-tarif-cukai-rokok-naik-jumlah-layer-berkurang-35245>

⁷² Regulation of the Minister of Health. number 188/MENKES/PB/I/2011, Ministry of Health

⁷³ Presidential Regulation number 32/2002. pertaining broadcasting. Office of the President of Republic Indonesia

50/2005, which establishes time limits for broadcasting cigarette advertisements⁷⁴. To address the inclusion of pictorial health warnings on cigarette packaging, the government introduced follow-up measures such as government regulation No. 109/2012 and Minister of Health Regulation (Permenkes) No. 28/MENKES/2013, which mandate the inclusion of pictorial health warnings and health information on tobacco product packaging⁷⁵. Additionally, the supervision and control of the cigarette industry are governed by Minister of Industry Regulation No. 64/M-IND/PER/7/2014⁷⁶, while Law No. 39 of 2014 regulates the cultivation of tobacco plants⁷⁷. These regulations collectively cover a wide range of aspects related to cigarette use, from smoking restrictions to advertising, health warnings, industry supervision, and tobacco plantation.

44. Currently, government regulations concerning electronic cigarettes and other tobacco processing products (HPTL) have primarily focused on tax-related measures, while other aspects remain largely unaddressed. The excise rate imposed on the HPTL is regulated in Minister of Finance Regulation Number 146/PMK.010/2017 concerning excise tariffs for tobacco products and HPTL⁷⁸ ⁷⁹. The excise rate imposed on this HPTL is 57% and took effect in July 2018⁸⁰. To update regulation number 146/PMK.010/2017, the Minister of Finance released regulation number 193/PMK.010/2021 concerning excise tariffs for electronic cigarettes and HPTL. This regulation describes that electronic cigarettes encompass solid e-cigarettes, which include heated tobacco products, open-system liquid E-Cigarette, and closed-system liquid E-Cigarette, while HPTL encompasses molasses tobacco, snuff tobacco, and chewing tobacco⁸¹.
45. Further to regulation number 193/PMK.010/2021, the Ministry of Finance released regulation number 192/PMK.010/2022 mandates the escalation of excise rates for electronic cigarettes and HPTL⁸². For the years 2023 and 2024, there will be a 15% increase in the excise rates for e-cigarettes, while HPTL will undergo a 6% increase in their excise rates, This increase will remain in effect for the next five years⁸³.

⁷⁴ Presidential Regulation number 50/2005. Pertaining broadcasting practice of private broadcasting firms. Office of the President of Republic Indonesia

⁷⁵ Widyawati (2018). Media release: Peringatan Kesehatan Bergambar di Kemasan Rokok Diperbaharui. Rokok; Redaksi Sehat Negeriku. Ministry of Health. Retrieved from <https://sehatnegeriku.kemkes.go.id/baca/rilis-media/20180531/1826040/peringatan-kesehatan-bergambar-kemasan-rokok-diperbaharui/>

⁷⁶ Regulation of the Minister of Industry number 64/M-IND/PER/7/2014. The Ministry of Industry

⁷⁷ Presidential Regulation number 39/2014. Pertaining plantation. Office of the President of Republic Indonesia

⁷⁸ Regulation of the Minister of Finance 146/PMK. 010/2017. The Ministry of Finance

⁷⁹ Sarwono A (2021). The Effectiveness of Advalorem Rate Policy in Minimizing the Circulation of other Tobacco Processing Product (HPTL) Illegal Electric Cigarette Liquid, *Awang Long Law Review*, Vol. 4, No. 1, November 2021: 180-190.

⁸⁰ Hasanah S (2018). Dasar Hukum Penetapan Tarif Cukai Cairan Vape (Rokok Elektrik). *HukumOnline.com*. Retrieved from <https://www.hukumonline.com/klinik/a/dasar-hukum-penetapan-tarif-cukai-cairan-ivape-i-rokok-elektrik-lt5a138d4811698/#!>

⁸¹ Regulation of the Minister of Finance 193/PMK. 010/2021. The Ministry of Finance

⁸² Regulation of the Minister of Finance 192/PMK. 010/2022. The Ministry of Finance

⁸³ Humas Kemensetneg RI (2022). Pemerintah Naikkan Tarif Cukai Hasil Tembakau Tahun 2023 dan 2024. Ministry of State Secretariat

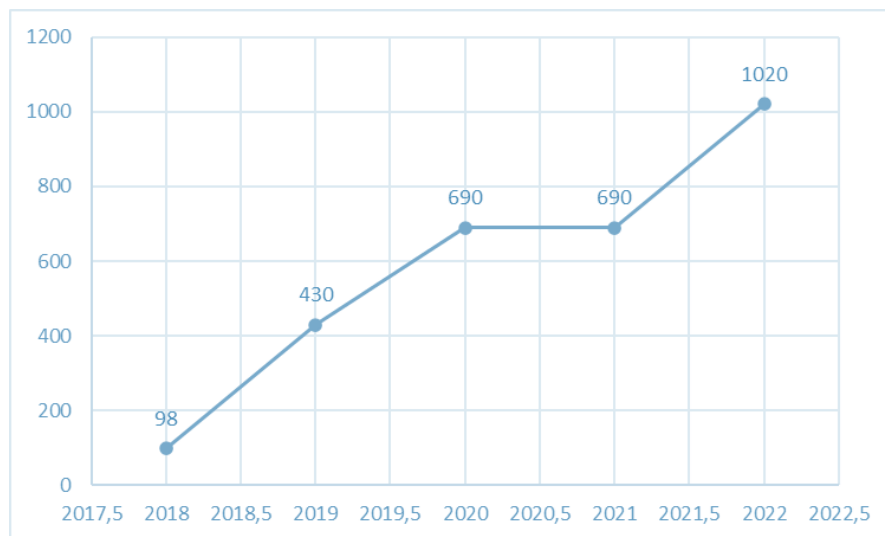
Table 1: e-cigarette and HPTL excise tax and average tax increase

No	Year	Excise Tax (e-cigs)	Tax average increase (e-cigs)	Excise Tax (HPTL)	Tax average increase (HPTL)
1	2018	57%	0%	57%	0%
2	2019	57%	0%	57%	0%
3	2020	57%	0%	57%	0%
4	2021	57%	0%	57%	0%
5	2022	57%	0%	57%	0%
6	2023	57%	15%	57%	6%
7	2024	57%	15%	57%	6%

Source: Data compilation from various sources

46. The contribution of electric cigarettes and heated tobacco products (HPTL) to state excise revenues has exhibited a notable increase year by year. In 2022 alone, this excise revenue reached 1.02 trillion⁸⁴, marking a substantial rise of approximately 10 times compared to the 2018 figure of 98 billion. It is important to note that the state revenue from the HPTL excise rate encompasses a combination of e-cigarettes and other HPTL products. However, there is no available data specifically detailing the breakdown for each product type over the years, such as e-cigarettes, HTPs, molasses tobacco, snuff tobacco, and chewing tobacco.

Graph 7: HPTL Tax Excise Revenue



Source: Data compilation from various sources

⁸⁴ Kristianus A, Harahap R (2023). Realisasi Cukai Rokok Elektrik 2022 Hanya Rp 1,02 Triliun. BeritaSatu.com. Retrieved from <https://www.beritasatu.com/ekonomi/1020021/realisasi-cukai-rokok-elektrik-2022-hanya-rp-102-triliun>

RESPONDENTS' DEMOGRAPHIC AND SOCIO-ECONOMIC PROFILE

Data Collection and Sampling

The study was conducted in five provincial capital cities in Indonesia, namely Jakarta, Bandung, Semarang, Surabaya, and Makassar. Several factors were considered in selecting the study sites, including (1) the presence of large cities with a significant population and a substantial number of cigarettes, e-cigarette, and HTP consumers; (2) the level of accessibility to the study sites; and (3) the existing connection we had with each study site.

Within each city as a research site, we divided the total population into three clusters: (a) Cluster-1: Combustible cigarette users, (b) Cluster-2: Electronic cigarette users, and (c) Cluster-3: Heated Tobacco Products users.

From each cluster within each study site, study participants were randomly selected. The table below provides detailed information on the study clusters and participants:

Table 2: Population sampling

Study Location	Cigarette Consumers	HTPs consumer	e-cigarettes consumers
Jakarta	50	50	50
Bandung	50	50	50
Semarang	50	50	50
Surabaya	50	50	50
Makassar	50	50	50
Total	250	250	250

Source: IDF research team

Data collection methods play a crucial role in our study. We employed both primary and secondary data collection approaches. Primary data was collected using two methods: (a) the survey with questionnaire method, and (b) the in-depth interview method.

The survey with the questionnaire method was utilized to document respondents' perceptions, attitudes, beliefs, and knowledge about the products. This method involved distributing a structured questionnaire to study participants, allowing them to provide their responses based on the provided options or by providing written explanations. The in-depth interview method was used to gather information from study participants on a one-on-one basis. This method involved conducting face-to-face interviews, where a series of predetermined questions were asked to delve deeper into participants' experiences, opinions, and insights.

For the secondary data, we sourced information through literature studies encompassing articles, publications, reports, and other relevant sources.. The table below provides detailed information on the data collection methods employed in our study:

Table 3: Data collection methods

	Survey (F2F)	In-depth interview (F2F)	Literature Studies
HTPs consumers	V	V	
Cigarette consumers	V	V	
E-cigarette consumers	V	V	
Reports, Stats data, articles, publications			V

Source: IDF research team

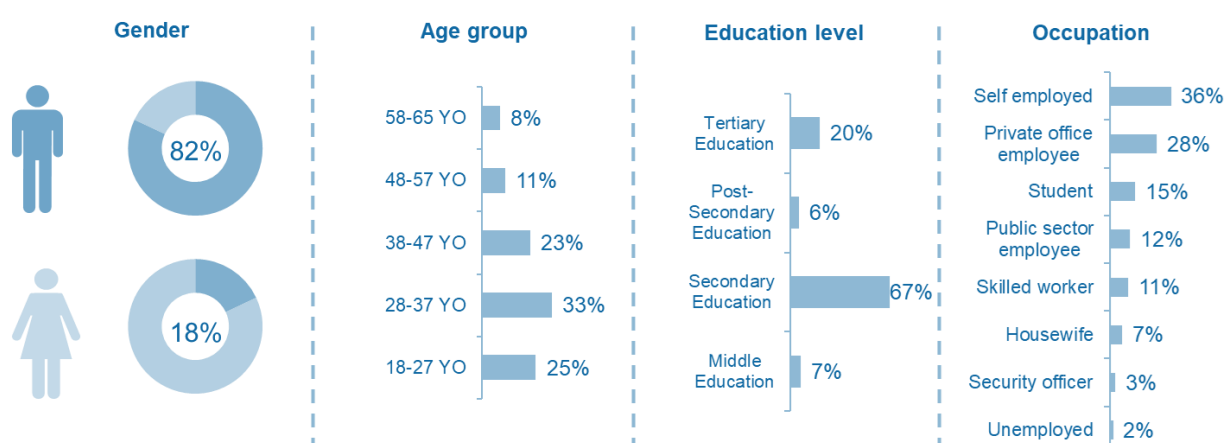
To gather respondents' data, we utilize survey questionnaires in a way that's transparent and direct. The survey was distributed both in-person and online with the help of a customized computer program to sort all the responses

Combustible Cigarette Respondents' Demographic Profile

Our survey data reveals a clear gender disparity among combustible cigarette respondents in all selected cities, with males comprising 82% and females only representing 18%. In terms of age, the dominant group within this cluster consists of active adult smokers aged 28-37 years old, followed by the younger age group of 18-28 years old. The latter group mainly comprises high school students and early-year graduate diploma students.

Furthermore, the survey data indicate that the majority of respondents have a secondary education as their highest level of education. Additionally, a significant portion of respondents works as unaffiliated workers in small businesses, including a substantial number of freelancers. The second-highest occupational category consists of white-collar workers employed in private companies and industries, often with higher incomes.

Graph 8: Combustible cigarette respondents' demographic



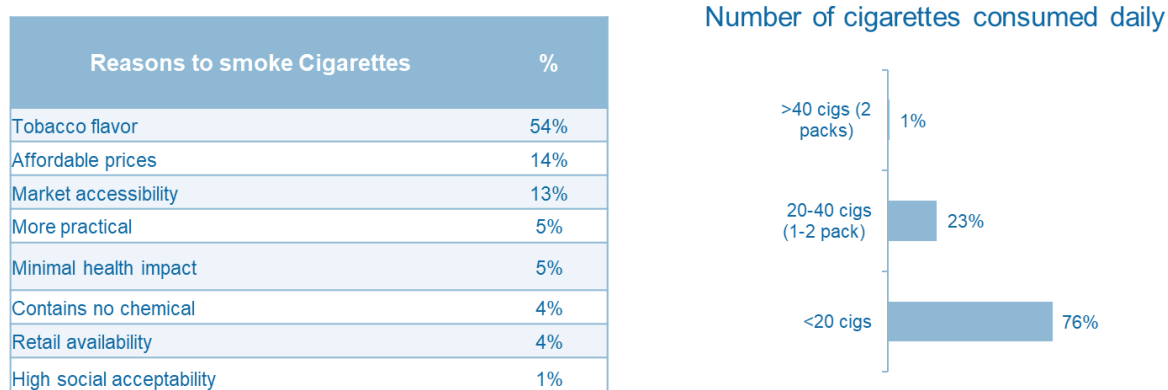
Source: IDF Research team

Among the participants included in this study who were users of combustible cigarettes, the majority (76%) were active smokers who consumed an average of fewer than 20 cigarettes per day.

Only a small percentage (1%) were categorized as heavy smokers, consuming more than 40 cigarettes daily.

In addition to price (14%) and accessibility (13%), the primary reason cited by these respondents for using conventional cigarettes, particularly Kretek cigarettes, was the distinctive taste of tobacco. This preference for the unique flavour of tobacco, especially prevalent among 54% of the respondents, contributed significantly to their choice of conventional cigarettes.

Table 4: Reason for Smoking Combustible Cigarette and Graph of number of cigarettes consumed daily



Source: IDF Research team

Among the respondents who preferred conventional cigarettes, a notable majority (22%) favoured Sampoerna Mild Kretek with low tar and nicotine. Gudang Garam Surya and Gudang Garam International kretek cigarettes were the next popular choices, with 19.1% and 14.8% of respondents selecting them, respectively. These findings indicate that kretek cigarettes rank among the top choices of respondents, highlighting their popularity as the most favoured type of cigarette in Indonesia.

When asked about family members and relatives who smoke, the survey revealed that the majority of respondents (42%) mentioned their parents as smokers, followed by siblings (22%). These findings suggest that the role of immediate family members, particularly parents, plays a significant role in shaping a generation of smokers. Furthermore, it is noteworthy that a majority of respondents (30%) identified their home environment as their preferred location for smoking.

Table 5: Combustible Cigarette Consumption Statistics

Cigarette Flavor & Brand	%	Other family members who smoke	%	Smoking areas	%
Low tar & Nicotine kretek (Sampoerna Mild)	22.0%	Parents	42%	Home Outdoors	30%
Kretek full flavors (Gudang Garam Surya)	19.1%	Brothers/sisters	22%	Office Outdoors	24%
Kretek full flavors (Gudang Garam Int'l)	14.8%	Spouse	19%	Home Indoor	19%
Kretek flavor- filtered (Djarum super)	5.5%	Son/daughter	11%	Smoking zones	14%
Kretek flavors (Dji Sam Soe- Sampoerna)	8.1%	Friends	4%	Office indoor	13%
White cigarette (Esse)	3.8%	Uncle	2%		
White cigarette (Marlboro)	3.4%				
Kretek flavors – filtered (Sampoerna Magnum)	3.4%				
White cigarette (L.A-Djarum)	3.0%				
Mild Kretek (Class Mild-Nojorono Tobacco)	2.5%				
White cigarette (Dunhill – BAT)	2.1%				
White cigarette filter (Camel-Reynolds Tobacco)	1.7%				
Kretek menthol filter (Neslite)	1.3%				
White cigarette (Troy)	1.3%				
White cigarette (other merk)	8.1%				

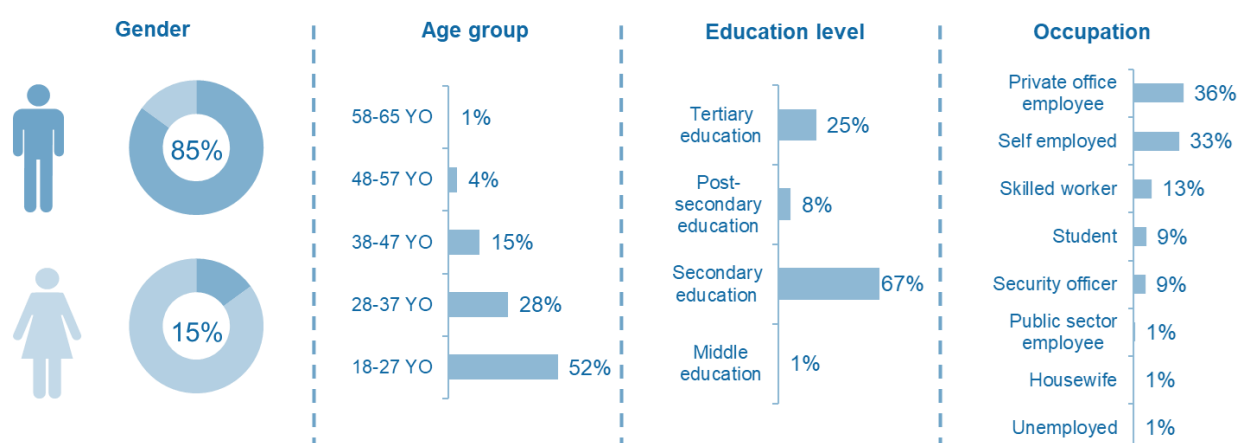
Source: IDF Research team

e-Cigarette Respondents' Demographic Profile

Similar to the group of respondents who use combustible cigarettes, the group of e-cigarette users was predominantly male, constituting 85% of the respondents, while females accounted for only 15%. In terms of age, this group was primarily composed of younger smokers aged 18 to 27 years old. The success of e-cigarette companies targeting the younger generation through social media platform advertisements is evident from this small group of respondents. In Indonesia, e-cigarette businesses are actively engaged in the promotion and marketing of their products through social media platforms, employing content specifically designed to target the younger population⁸⁵. Concerning education level, the group of e-cigarette respondents is comparable to the group of combustible cigarette users. The majority of respondents from both groups hold secondary education as their highest level of education. However, the e-cigarette group has a higher number of respondents with tertiary education, surpassing the figures observed in combustible cigarettes.

When considering the occupational category, white-collar workers employed in private companies and industries dominated the e-cigarette respondents' group, accounting for 36% of the respondents. This percentage is higher than the 28% observed in the combustible cigarette group. This indicates that due to the relentless promotion on online and social media platforms, Indonesia's emerging e-cigarette market is primarily dominated by the younger demographic, who tend to have a slightly higher level of education and income compared to traditional cigarette respondents.

Graph 9: e-cigarette respondents' demographic



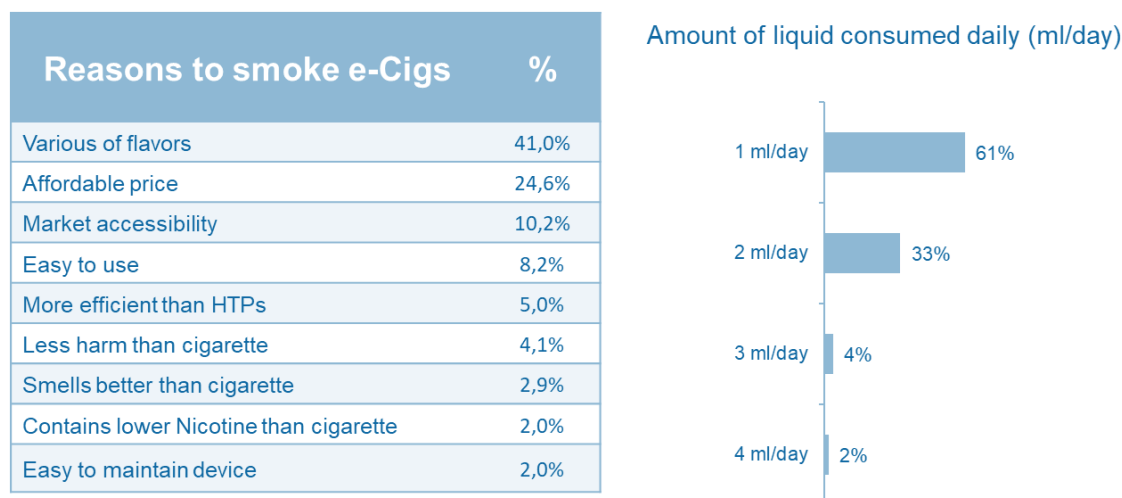
Source: IDF Research team

Based on our field data, the majority of e-cigarette users were categorized as light smokers, with 61% consuming 1ml of e-liquid per day, while only 2% were classified as heavy users consuming up to 4ml daily. Among these respondents, the primary reason for using e-cigarettes was the availability of various flavours offered by e-liquids, accounting for 41% of the respondents. Other factors such as price (24.6%) and product availability in the market (10.2%) also played a role in their decision to use e-cigarettes.

⁸⁵ Vital Strategies (2022). Vital stories; How Indonesian Youth Are Being Hooked On E-Cigarettes Through Social Media. Vital Strategies

It is worth noting that a relatively small percentage (4.1%) of the respondents believed that e-cigarettes pose fewer health risks compared to conventional cigarettes.

Table 6: Reason for Smoking e-Cigarettes and Graph of the number of e-liquid consumed daily



Source: IDF Research team

Delving deeper into the variations of e-liquid flavours, our findings indicate that the majority of respondents (55%) preferred fruity flavours, while creamy flavours ranked second with 19% of the respondents selecting them. Our analysis suggests that the wide array of e-liquid flavours, combined with persistent promotion through social media platforms, has contributed to the popularity of e-cigarettes among teenagers, at least within the five cities examined.

Regarding the factors that influenced the respondents' choice of e-cigarettes, our investigation revealed that a significant majority (35%) were influenced by their siblings who also used e-cigarettes. Additionally, among the majority of teenage e-cigarette users, 30% stated that their parents were also e-cigarette users, which made them familiar with e-cigarettes from a young age. As a result, they felt comfortable using e-cigarettes at home (31%), and some even used them at work (20%).

Table 7: e-Cigarette Consumption Statistics

Flavor	%	Other family members who smoke	%	Smoking Areas	%
Fruity flavors	55%	Parents	30%	Home outdoor	31%
Creamy	19%	Brothers/sisters	35%	Office outdoor	20%
Oat drips	9%	Friends	10%	Home indoor	18%
Coffee	6%	Uncle	10%	Smoking zones	15%
American breakfast	3%	Spouse	10%	Office indoor	9%
Sereal	2%	Son/daughter	5%	Public places	7%
Ala carte	2%				
Salt	2%				
Muffin yb	1%				
Runa	1%				

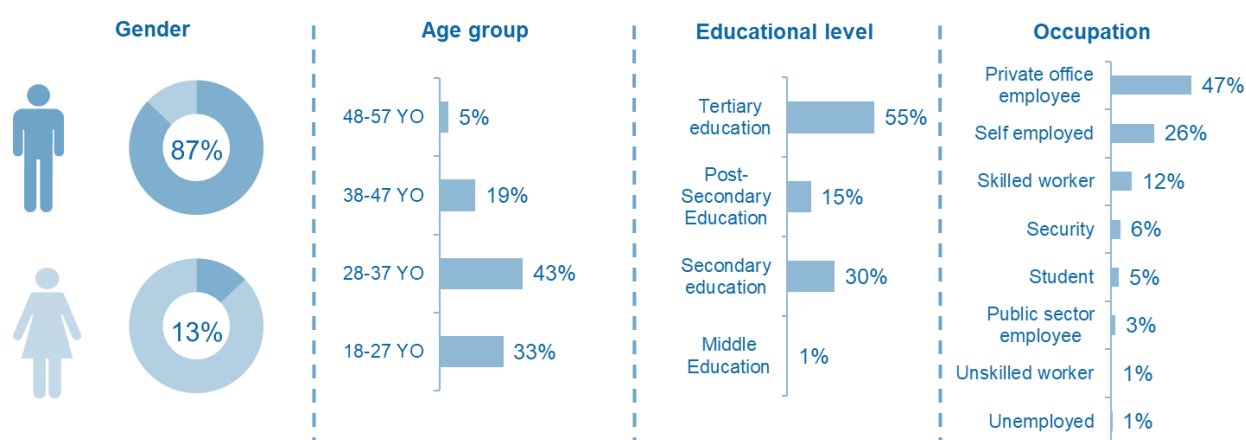
Source: IDF Research team

HTPs Respondents' Demographic Profile

Males continue to dominate this group of respondents, outnumbering those in the combustible and e-cigarette groups. Moreover, this group exhibits a higher level of education, with the majority (55%) having attained tertiary education as their latest academic achievement. Consequently, they are more likely to secure white-collar positions in private companies and industries (47%). Additionally, 25% of the respondents identified themselves as owners of medium-sized businesses, enjoying higher incomes compared to unaffiliated workers in small businesses.

These findings suggest that the higher prices of HTPs, attributed to the high excise tax rate, contribute to their accessibility primarily among consumers with better education levels, higher incomes, and limited information regarding these harm-reduction products.

Graph 10: HTPs respondents' demographic

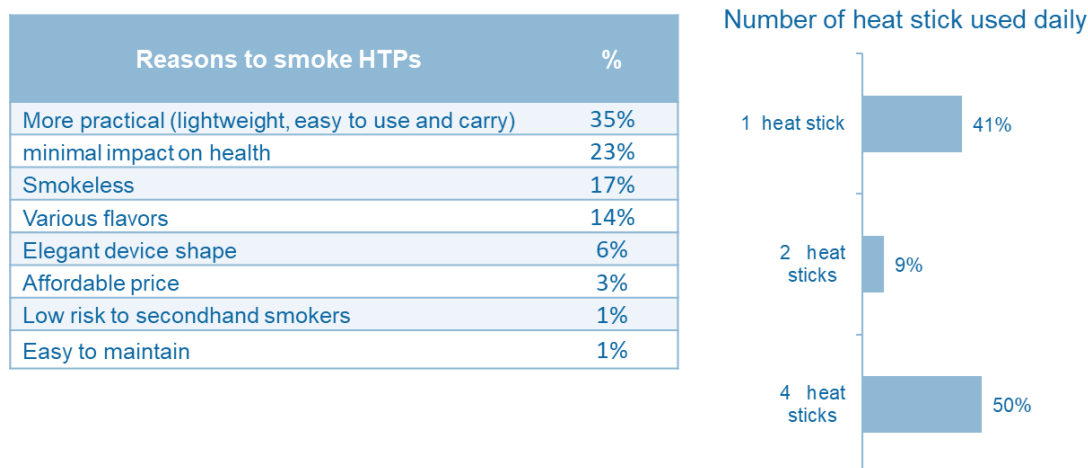


Source: IDF Research team

Based on our research on HTPs respondents, 50% were identified as active HTPs smokers, consuming up to 4 heat sticks per day. The main reasons cited for using HTPs were practicality and style, with 35% of respondents selecting this answer. Only 23% of respondents considered the low-risk factor to health as a reason for using HTPs, and merely 1% considered the low risk to passive smokers as a motivation for using HTPs.

These data indicate that respondents have limited knowledge about harm-reduction products that could serve as alternatives to reduce the health risks associated with cigarette smoking. Consequently, the primary motive for choosing HTPs products among the respondents did not stem from the aim of mitigating health risks.

Table 8: Reason for Smoking HTPs and Graph of the number of heat-stick consumed daily



Source: IDF Research team

According to the interviews conducted with respondents using heated tobacco products (HTPs), it was found that the most popular flavours among them were synthetic flavours., including Berry (12.4%), Minty (11.2%), Fruity (10.3%), and others, as reflected in the consumption statistics table below. Notably, we did not observe a significant preference for the original taste of tobacco commonly associated with conventional smokers.

Our field data indicate that the main influencers for HTPs users were siblings (37%) and friends (31%). Since HTPs are relatively new to the Indonesian market, the number of elderly users familiar with conventional cigarettes is significantly lower. This is evident from the relatively low percentage (7%) of parents as family members who use HTPs, serving as an inspiration for HTPs respondents.

Regarding the locations where HTPs are used, the distribution between indoor and outdoor locations was relatively balanced. Approximately 25% of respondents reported using HTPs in the home environment, 20% inside their own houses, 22% in office environments, and 15% inside office settings. The significant number of HTPs users smoking indoors as compared to combustible cigarettes indirectly suggests that the smoke and odours emitted by HTPs are less intrusive and have minimal effects compared to combustible cigarettes.

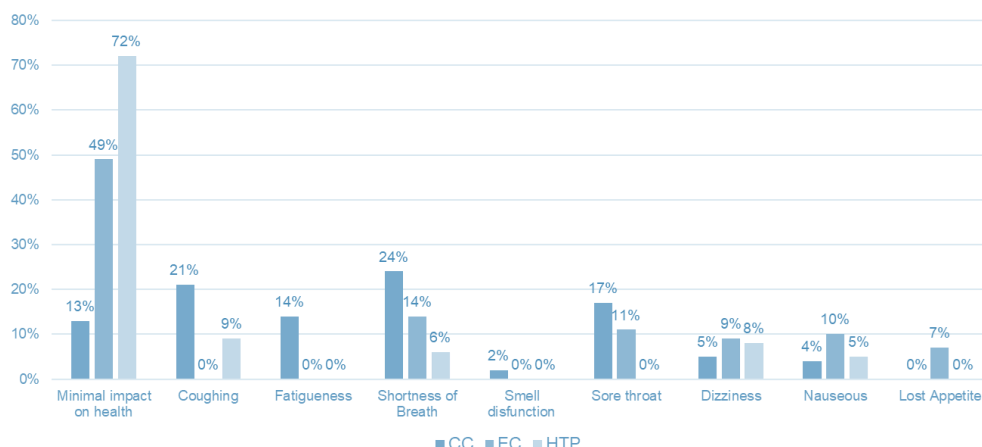
Table 9: HTPs Consumption Statistics

Favorite HTPs flavor	%	Other family members Smoke HTPs	%	Smoking Areas	%
Dark Berry flavor (Purple Wave)	12,4%	Parents	7%	Home outdoor	25%
Minty flavor (Blue)	11,2%	Brothers/sisters	37%	Office outdoor	22%
Tree Fruit flavor (Bright Vibe)	10,3%	Friends	31%	Home indoor	20%
Minty flavor (Blue)	7,9%	Uncle	10%	Office indoor	15%
Strong Cocoa flavor (Bronze)	7,0%	Spouse	10%	Smoking Zones	13%
Woody flavor (Sienna)	6,6%	Son/daughter	5%	Others (store vape, food stall)	4%
Nutty flavor (Amber)	5,0%				
Mild zesty flavor (Turquoise)	3,7%				
Mild minty flavor (Green)	3,3%				
Fresh Blossom flavor (Dimensions Yugen)	3,3%				
Warm Stone Fruit (Dimensions Apricity)	2,9%				

Source: IDF Research team

Although reducing health risks is not the primary reason for respondents choosing HTPs, the survey results revealed that HTPs have a lesser impact on health compared to e-cigarettes and combustible cigarettes. The data indicated that 72% of respondents reported minimal health effects during the use of HTPs as single users, whereas the corresponding percentages for e-cigarettes and combustible cigarettes were 49% and 13% respectively.

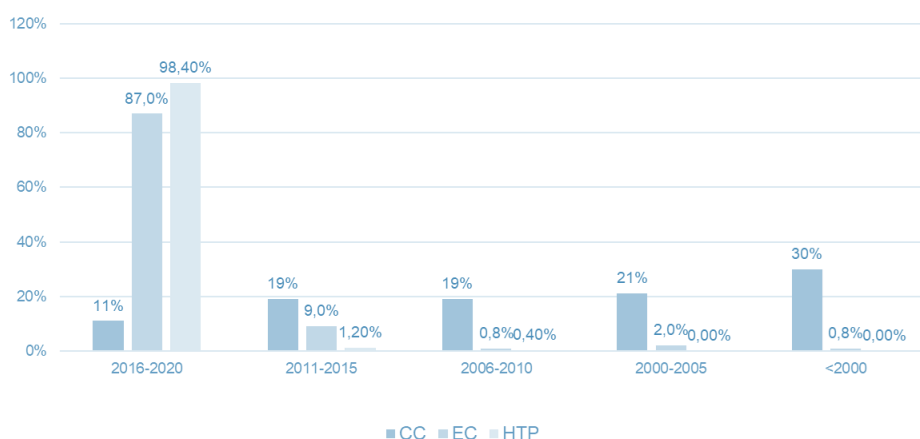
Graph 11: Perceived health impact of using cigarettes, e-cigarettes, and HTPs



Source: IDF Research team

It is worth noting that the data could be influenced by various factors, such as differences in the duration of product use. For example, respondents who were using combustible cigarettes had likely been smoking for an extended period of time. The survey data indicated that 30% of these respondents had been using cigarettes prior to the year 2000, during this period the potential accumulation of harmful substances in their bodies was high, resulting in greater health risks. In contrast, HTPs have only been available to consumers for the past 4 years, which means that HTPs respondents have had less time to accumulate harmful substances if there are any. However, despite these considerations, the findings still provide evidence that HTP users perceive a reduced health impact compared to users of e-cigarettes and traditional cigarettes.

Graph 12: Year start using cigarettes, e-cigarettes, and HTPs



Source: IDF Research team

PRODUCT ACCESSIBILITY AND PRICE RANGE

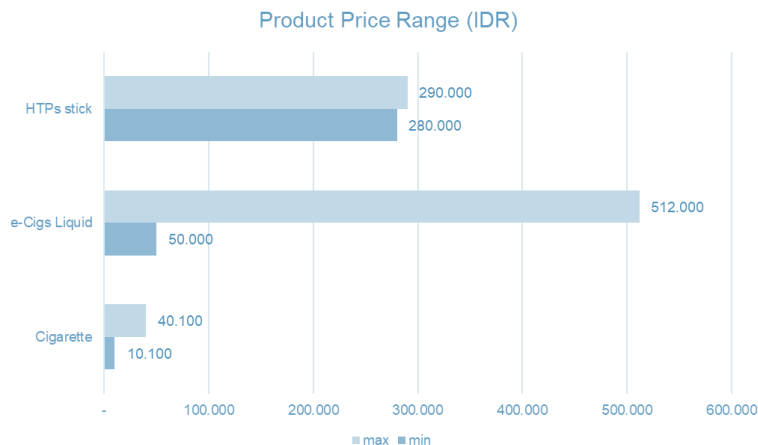
Product Price Range

The three types of tobacco products we examined in five cities exhibit a significant variation in prices. Similar to conventional cigarettes, the price range spans from 10K to 40K. This disparity arises from varying price structures within each cigarette category, stemming from differences in the tax tier system. For instance, Hand-rolled Kretek (SKT) incurs a lower excise tax rate compared to Machine-made White Cigarettes (SPM), resulting in higher prices for SPM cigarettes compared to SKT cigarettes.

The price range for e-cigarette products was found to be remarkably broad (50K-512K) at the time of data collection. These e-liquid products are readily available to consumers through both physical retail stores and online markets, creating an environment where illicit goods can be easily distributed.

Unlike e-cigarette products, sales of HTPs (Heated Tobacco Products) are conducted exclusively through official HTPs outlets and require a membership system for access. As a result, the price range for this product is considerably narrow, specifically ranging from 280K to 290K during the data collection period.

Graph 13: Product Price Range



Source: IDF Research team

Product Accessibility

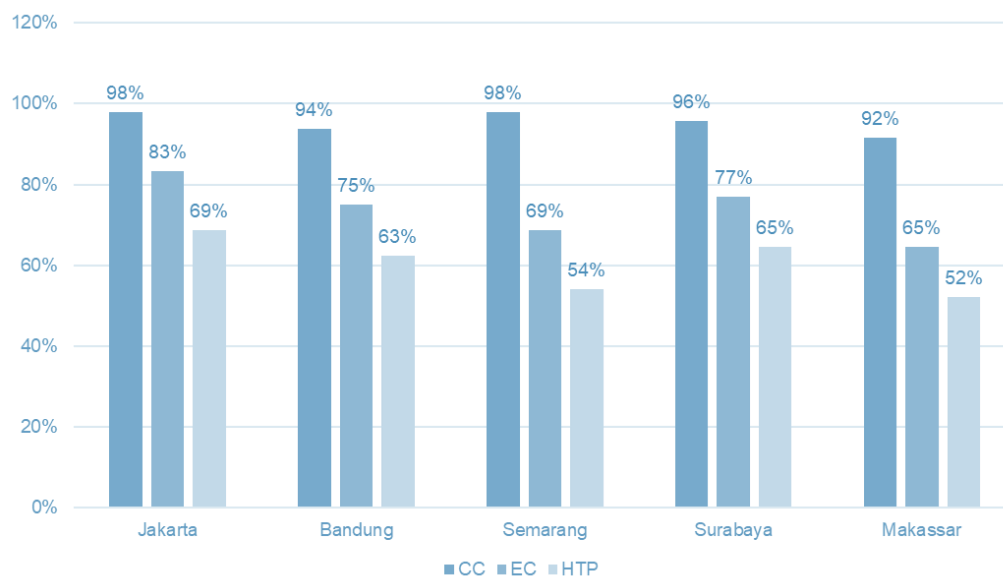
Based on our field observations, the level of accessibility for these three products is predominantly determined by the price factor and product availability in the market. When considering conventional cigarettes, not only are they the most affordable option among the three, but they are also widely available throughout the city, even in close proximity to schools. Consequently, even students can effortlessly purchase loose cigarette products from nearby convenience stores. As a result, the accessibility level of conventional cigarettes remains consistently the highest across all five cities examined in our study.

In contrast, e-cigarettes exhibit a lower level of accessibility compared to conventional cigarettes, primarily due to their higher price point. Additionally, the utilization of e-cigarettes necessitates the acquisition of additional components such as starter kits and liquids, which further contribute to their reduced accessibility when compared to conventional cigarettes.

The level of accessibility for e-cigarettes surpasses that of HTPs primarily due to the widespread availability of e-cigarette products in the market and the lack of strict regulations. Consumers can conveniently purchase them at vape outlets or through online platforms. In the case of the 5 cities, the e-cigarette market boasts several local brands like Nasty Juice, Vapeboss, and Indie Juice, alongside international brands such as Smok and Vaporesso. E-liquids, available in a wide range of flavours including fruit, menthol, and dessert, have gained popularity among the younger demographic of e-cigarette users in the study location.

Conversely, HTPs operate on a membership system, necessitating more effort on the part of consumers to acquire them. Furthermore, HTPs tend to have a relatively higher price point, and consumers are also required to obtain starter kits and heat sticks (Heets) to use them. Consequently, the accessibility of HTPs is categorized as the lowest among all the products considered.

. Graph 14: Product Accessibility in 5 Cities



Source: IDF Research team



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DISCLOSURE

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