

Does the increase in the cigarette excise tax affect cigarette consumption?

Neni Susilawati¹, Daffa Abyan¹, Sabrina Cristalia Aruan¹, Marcel Angwyn²

¹Department of Fiscal Administration, Faculty of Administrative Sciences, Universitas Indonesia, Depok, Indonesia

²Department of Public Administration, Faculty of Administrative Sciences, Universitas Indonesia, Depok, Indonesia

Article Info

Article history:

Received Mar 14, 2022

Revised Aug 21, 2022

Accepted Sep 7, 2022

Keywords:

Cigarette excise
Consumption tax
Excise
Policy effectiveness
Public health

ABSTRACT

The level of cigarette excise rates is one of the factors of cigarette costs. However, it is unclear how high the cigarette excise rate should be in order to reduce smoking in Indonesia. The aim of this research was to see how effective the cigarette excise tariff policy was at lowering public cigarette usage. The study conducted a quantitative approach, employing survey data collection techniques on a number of smokers as well as in-depth interviews. The data indicated that a 12.5% increase in the cigarette excise charge had a negligible effect on reducing cigarette consumption. The author identified numerous variables that contributed to the tobacco excise tax increase's ineffectiveness as a policy.

This is an open access article under the [CC BY-SA](https://creativecommons.org/licenses/by-sa/4.0/) license.



Corresponding Author:

Neni Susilawati

Department of Fiscal Administration, Faculty of Administrative Sciences, Universitas Indonesia

Pondok Cina, Beji, Depok, Indonesia

Email: neni.susilawati31@ui.ac.id

1. INTRODUCTION

Regardless of how much the government preaches about the risks of smoking, the public's cigarette consumption remains unchanged. The affordability of cigarette pricing may be contributing to Indonesia's rising uncontrollable cigarette consumption tendency. Currently, cigarettes are the second highest priority after rice, with six out of ten households in Indonesia incurring expenses to suit their cigarette needs [1]. Due to easy access to cigarettes, this habit has become ingrained in social life. As a result, smoking has developed into a way of life or even a necessity for its current users in Indonesia.

Cigarette spending in Indonesia tends to increase between 2015 and 2020 [2]. Even if there was a coronavirus disease 2019 (COVID-19) pandemic in 2019-2020, it did not convince people to quit smoking. Indeed, many people believe that there is no association between smoking and COVID-19 [3]. Smoking's adverse health consequences have resulted in a rise in the burden of disease financing that must be shared by the government. This has a negative impact on the country's economy, particularly the national health insurance (NHI) program for chronic disease health care. Spending on chronic diseases associated with smoking accounts for one-fifth of overall medical expenditures, worsening the NHI deficit [4].

To address the issue of cigarette usage, the government enacts numerous restrictions, one of which is the imposition of a cigarette excise. The implementation of an excise tax with the goal of reducing smoking prevalence undoubtedly has a number of benefits and drawbacks. However, the problem is this policy does not always work in terms of smoking prevalence reduction. Cigarette excise is a policy that is applied and evaluated on a constant basis in order to achieve the government's goal of reducing cigarette use. The implementation of a 12.5% cigarette excise tax in 2021 also results in a 4.7% increase in the state

budget's tobacco product excise income objective from 2020 to 2021 [5]. Cigarette prices increasing in response to the increase in cigarette excise is also believed to be a step toward public consumption suppression. This study was done to determine whether the policy of increasing cigarette taxes has a significant impact on lowering cigarette usage.

The application of cigarette excise on consumers is intended to maintain a reasonable price for cigarettes. Cigarette costs that are cheap or affordable can contribute to an increase in the prevalence of smoking. The government imposes excises and prices on cigarettes not merely to increase revenue, but also to discourage smoking. However, according to the WHO, the excise duty on cigarettes should be at least 70% of the retail price of the cigarettes. Thus, the imposition of a cigarette excise tax, which increases the price of cigarettes, is projected to decrease smoking prevalence in Indonesia [4].

However, cigarettes are inelastic products that lead to addiction, which implies that regardless of the price increase associated with the cigarette excise, cigarette buyers will continue to acquire these goods [6]. Indonesia is currently ranked third in the world in terms of cigarette use, behind China and India [7]. Furthermore, the cigarette excise tax policy does not just focus on consumption control; there are various other factors that must be studied and taken into account when increasing the excise tax policy each year. One of them is concerned with the welfare and long-term viability of tobacco industry workers and small-scale tobacco producers. Around 158,000 Indonesians are reported to work directly in the cigarette industry, while more than 526 thousand family heads rely on tobacco production for their living. If one family head supports at least four family members, the number of persons in Indonesia whose lives are impacted indirectly by tobacco usage is fairly large.

On the one hand, the high frequency of smoking imposes a significant financial burden on the state, but on the other hand, it is a well-known reality that cigarettes have developed into a social need. Smoking has developed into a culture and a source of contention within the industry. This is why the author wishes to assess the policy effectiveness of a 12.5% increase in the excise tax on cigarettes in lowering public cigarette consumption.

Chaloupka *et al.* mentioned in their study that excise taxes are a powerful tool for reducing tobacco use, the potential of excise taxes to significantly reduce consumption and save lives remains high [8]. This study is consistent with the findings of Li-Ming Ho *et al.* who found that when cigarette prices increased by an average of 9.51%, average annual cigarette use reduced by 3.56%. Additionally, income from tobacco taxes increased by 16.2% every year [9].

However, given the unique characteristics of Indonesia in comparison to the research locus of Frank and Li-Ming Ho, it appears that their hypothesis is not fully applicable in Indonesia. According to Prasetyo and Adrison, despite the Indonesian government's continued increase in cigarette excise rates, the complex tax system decreases the impact of cigarette excise hikes in making cigarettes more affordable. Additionally, the absence of a uniform retail selling price (HJE) for all types of cigarettes and a maximum tax burden on cigarettes of only 57% of HJE give additional incentives for cigarette makers to contain price rises [10]. Indeed, Murwendah and Vanessa claimed that, in comparison to Thailand, the state levies on tobacco consumption in Indonesia are less diversified, and hence have not been able to considerably lower the prevalence of smoking in the country. Murwendah and Vanessa advocate in this qualitative study that the government considers increasing the maximum tax burden to 70% in order to affect the affordability of cigarette costs in the community [11]. Santoso and Erlando demonstrate through secondary data analysis that a rise in cigarette pricing does not diminish people's desire to become smokers. Rather, it demonstrates that the majority of Indonesians regard cigarettes to be a basic need [12]. In the context of the importance of cigarette excise in minimizing the negative externalities of cigarettes, this paper presents the most recent findings regarding the effectiveness of the government-imposed rise in cigarette excise in 2021 on cigarette use.

The researcher employs Knoepfel's theory of policy effectiveness in assessing the effectiveness of the policy of increasing cigarette excise. Because Knoepfel's theory is centered on behavior modification, it is more applicable for researchers to utilize and comprehend changes in cigarette consumption behavior prior to and following the increase in cigarette excise [12]. The more researchers understand regarding consumption behavior of cigarettes, the more precise policy could be made [13]. More precisely, according to Knoepfel's public policy theory, the intended end outcome of a policy as a result of political administration activity is a concrete result. The end result is an effect that is palpable in the community's social environment [9]. The final result can then be used to quantify the effectiveness of policies [10]. As a result, this theory encompasses both impact and outcome aspects. The impact dimension is evaluated quantitatively and qualitatively. While the result dimension includes cost-benefit and cost-utility analysis indicators [14]. Hence, understanding behavior is the ultimate tool in creating the policy, while also maintaining accuracy in the proposed solutions.

2. RESEARCH METHOD

2.1. Participants and recruitment procedure

To complete the three studies on cigarette excise in Indonesia mentioned previously, the author employs a different research approach, namely conducting a direct survey of 394 smokers from diverse locations in DKI Jakarta, Indonesia's capital city. This is where the research is novel; in addition to utilizing a variety of research methods, researchers uncover elements affecting the effectiveness of this cigarette excise legislation. Quota sampling is used to collect data. Respondents were randomly selected from five cities in the DKI Jakarta province.

2.2. Data collection

Face-to-face interviews were performed online via the Zoom and Google Meet programs. Each interview was taped and lasted around 60 minutes. Interviews enabled the research team to guide respondents through the questionnaire, including probing for unclear questions in order to achieve valid and reliable responses. The interview began with screening questions and progressed to inquiries about the respondents' characteristics, including their gender, age, domicile, occupation, education, and smoking habits. Then insert the core variable issue, namely the effect of the increase in cigarette taxation on smoking consumption behavior. Additionally, several respondents served as key informants for the in-depth interviews. The questionnaire items that required additional exploration were explored throughout the in-depth interview process. Additionally, researchers attempted to excavate data that had been omitted from the survey.

2.3. Data analysis

The coding sheets were used to enter the responses to the questionnaires used during the face-to-face interviews. The researcher previously produced a code book to serve as a guide for the study team as they entered data into the coding sheet. Following that, the researcher developed a master file for statistical product and service solutions (SPSS) input data preparation. All data entered into the coding sheet is sent to the sheet data view in SPSS once it has been cleaned for possible and contingency codes. SPSS next processes the data that has been entered so that it may generate an output that can be analyzed. Naturally, data processing is guided by a data analysis plan that has been developed following the completion of all data collection operations. The quantitative data generated by this survey is then examined and supplemented with information gleaned through in-depth interviews with key informants.

3. RESULTS AND DISCUSSION

3.1. Expected effects of the cigarette tax increase

3.1.1. Changes in smoking interest

The government implemented a policy of increasing the ad naturam excise tax on cigarettes by 12.5% with the primary goal of decreasing interest in cigarette smoking. The government took this measure in response to the world health organization (WHO) proposal that excise taxes be utilized not only to increase state revenue, but also to reduce smoking prevalence [4]. However, the gain in state revenue is more than offset by the decline in consumer interest. By 2020, the Indonesian tobacco products business contributed 10.11% of the national budget/*anggaran pendapatan belanja negara* (APBN) [15]. Meanwhile, as indicated in Figure 1, the change in interest of cigarette usage following the increase in excise taxes was not significant.

The majority of smokers, 79.69% (314 respondents), stated that their interest in cigarette consumption remained unchanged as a result of the increase in cigarette tax rates. Indeed, 4.56% (18 respondents) reported an increase in their intake. These findings demonstrate that the amount of interest in cigarette smoking is not solely determined by price, but also by other variables. One of the reasons is that cigarettes contain addictive compounds that create a dependence in smokers, making it difficult to quit [10]. Alfarisy et.al. research toward teenagers also indicates that smoking can have a beneficial psychological effect on its users' social lives [16]. The fact that psychological effect previously mentioned toward adults will remain the same because dependency ideally comes from addictive compound of cigarettes whether it is consumed by teenagers, adults, or even kids. To explain this reliance, consumer behavior among smokers demonstrates that there are unique requirements that can only be met by cigarettes [13]. When evaluated at a macro level, economic variables, most notably pricing, account for a relatively tiny portion of the government's solution to achieving a smoke-free society.

3.1.2. Changes in cigarette consumption

With reference to the prior debate, it is obvious that if there is no change in interest in cigarettes as a result of price rises, there will be no change in cigarette consumption. Indeed, even during COVID-19, cigarette purchases climbed by 13.1%, despite the fact that smoking increases the risk of death by 3.86%. As illustrated in Figure 2, there is no change in cigarette consumption while the condition of interest is constant.

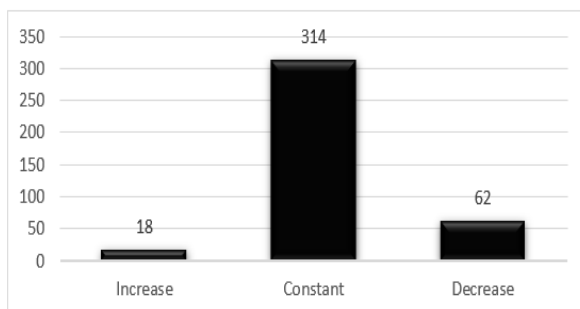


Figure 1. Changes in smoking interest in the aftermath of the cigarette excise hike

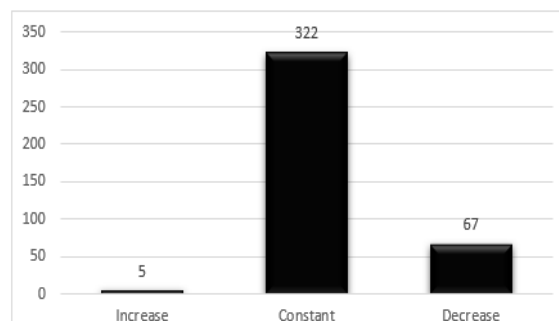


Figure 2. Changes in smoking consumption in the aftermath of the cigarette excise hike

A total of 322 respondents (81.72%) said that, notwithstanding the increase in the price of cigarettes due to the excise policy, public consumption remained stable. This indicates that, in addition to the dependence component, there is another factor that contributes to this state, namely that the policy of increasing cigarette taxes is still insufficiently effective. This is because the tariff rise is still insufficient to reduce the public's affordability of cigarettes. This is consistent with the findings of interviews, which indicate that the increase in cigarette excise taxes remains less than the increase in average household income.

Even under normal circumstances, Nizamie and Kautsar emphasize that when cigarettes are regarded as a typical good, their use will undoubtedly increase whenever money increases [17]. In contrast to high-income countries, when the average person's income increases, the excise tax must increase to keep the cigarette price increase greater than the average person's income growth [18]. As a study held by WHO in 2021 shows a data that on average of 10% price increase will reduce consumption by 5% in low and middle-income countries [19]. Thus, in Indonesia, the increase in cigarette excise duty should be more than the growth in people's incomes, so that the price element contributes to cigarette use reduction. The comparison between average household and the growth of excise tax of Indonesia and other countries can be shown in Table 1.

Table 1. Comparison of average household income and the growth of excise tax toward cigarettes between Indonesia and southeast countries [20], [21]

Country	Average household income per monthly	Growth cigarettes tax period 2021	Aggregate tobacco tax burden for retail price
Indonesia	USD 170	12.5%	63.5%
Thailand	USD 479	25% for packs up to Thai Baht 60 42% for packs up to Thai Baht 60	78.6%
Singapore	USD 4,630	Specific tax rate SGD 0.427/stick 7% of Goods & Service Tax (GST)	67.5%

Table 1 shows a legitimate proof that Indonesia excise tax increase is lower than Thailand (as apple-to-apple country) and Singapore (as high-income country). In fact, the average of household income in Indonesia is much lower than those two countries so are the impact of overall tax burden toward cigarette retail price. As a similar economic conditions country, Thailand, can make brave decision to increase cigarettes tax rate regardless how it will impact to other macro sectors. On the other hand, Singapore with the highest average household income in Southeast Asia still maintain its cigarettes tax rate so no matter how it increases, the tax rate will adjust toward its current condition as it shows 67.50% impact in retail price.

According to national cancer institute, the average cost worldwide of a pack of cigarettes is \$6.28 [22]. While Indonesia cigarettes price per stick is only 0.07 USD [23]. So, in total of a pack consist of 10 stick it will cost approximately only 0.7 USD. It shows that the increase of Indonesia cigarettes tax is not yet reach worldwide average price. This proof that Indonesia commitment towards reducing cigarettes consumption by making affordability index higher is still questionable.

The difficulties associated with increasing high cigarette excise taxes come when the government requires consideration of a variety of factors. This is because the cigarette industry has helped in the absorption of labor in Indonesia. In 2021, the ministry of business reported that the tobacco industry employed up to 5.98 million people, from the planting phase to distribution [24]. As a result, when the price of cigarettes becomes too high, the government is forced to manage production in order to avoid losses and save on expenditures such as job termination. When this occurs, the government should be held liable for the actions of these employees.

Another issue is that cigarette output increased by 4.3% during COVID-19, reaching 235.9 billion sticks [15]. This is another possibility that can be identified based on the study's findings. When the price of cigarettes becomes excessively high owing to dependence, the identification is made by switching to cheaper cigarette brands, rolling cigarettes yourself, or purchasing illegal cigarettes. That is, when smoking becomes unaffordable to smokers owing to "special needs", smokers will seek out many other options, preventing the goal of lowering cigarette consumption from being fulfilled. This demonstrates that Indonesia's current policy of increasing cigarette excise is not the primary solution, but rather necessitates a variety of remedies to the problems that occur as a result of the policy.

3.1.3. Changes in expenditure allocation for cigarette consumption

The second factor that could account for the increase in cigarette excise rates is that the majority of smokers regard cigarettes as a basic requirement, which means that each smoker typically operates on a set budget. Figure 3 demonstrates that smokers have a fixed budget before and following the policy of increasing cigarette excise taxes.

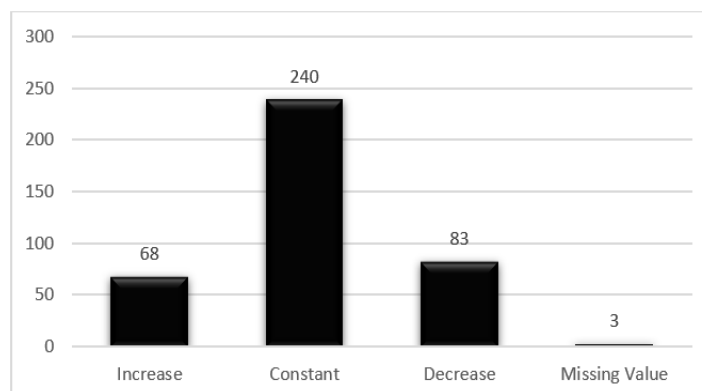


Figure 3. Changes in the allocation of cigarette consumption expenditures following the cigarette excise hike

Figure 3 shows that the majority of respondents (60.9%) reported no change in the allocation of cigarette consumption expenditures. Surprisingly, up to 68 respondents (17.2%) reported experiencing an increase. This is consistent with the fact that, even during a period of economic disruption caused by COVID-19, smokers maintained a set budget for cigarette spending and even increased it [25]. According to Mankiw's view, when an item is classified as a requirement, it becomes "stretchy" [26]. This implies that cigarettes have become a necessity, such that even if the price of cigarettes rises, smokers will continue to use them regardless of the quantity consumed. According to the survey findings, the majority of respondents regard cigarettes as a tertiary necessity. In contrast to these findings, figures from the central statistics agency in March 2021 indicate that cigarettes had surpassed food and beverages as a primary requirement, as indicated in Figure 4 [27].

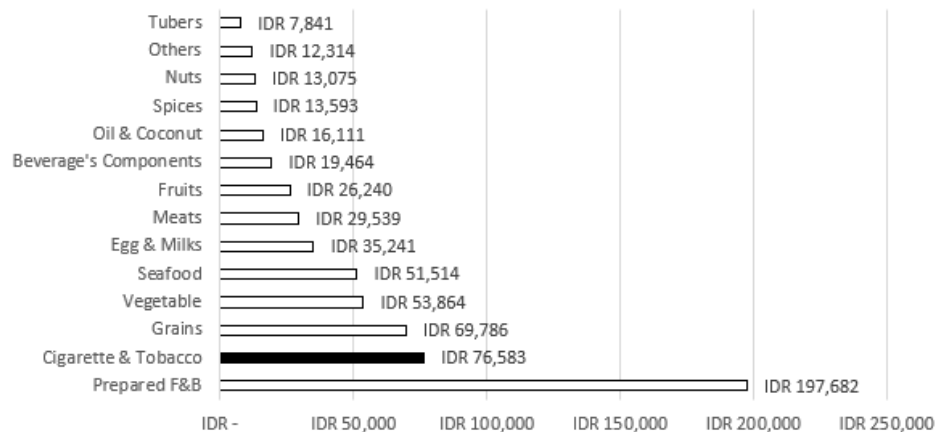


Figure 4. Indonesian public expenditure on average by commodity group. Secondary data processed from central statistics agency, (2021) [27]

Following the consumption of food and beverages, the majority of Indonesians spend on cigarettes. Figure 4 demonstrates that cigarettes conform to the consumptive's paradigm, in which consumption is motivated by individual preferences rather than logical choices based on necessities. Indeed, when other demands are considered, cigarettes, with their bad health consequences, should not be ranked second. This disorder is prevalent among smokers who live in impoverished circumstances. According to Hosseinpoor *et al.* paternal smoking in poor families in Indonesia has been shown to divert spending from fruit and vegetables and exacerbate child malnutrition [28]. Additionally, the international union against tuberculosis and lung disease (IUATLD) stated that expenditure on tobacco products represents loss of money that could better be used for basic needs, such as food, education, and health care [29]. Furthermore, according to Nasrudin *et al.* the amount of cigarettes spending in poor smoking household was around 12% of their total spending which results that smoking family are more likely to spend less for health care and education compared to non-smoking family [30]. This means that until 2021, the reality that cigarettes have become a necessary component of life will remain unchanged.

3.1.4. Changes in the position of cigarettes in the strata of living needs

According to a study conducted by researchers, the majority of people regard cigarettes as a tertiary necessity in their hierarchy of life necessities, both before and after the policy of increasing cigarette taxes was implemented. Following the rise in cigarette excise, respondents who identified cigarettes as a primary need decreased by only 4.32%, while respondents who identified cigarettes as a secondary need decreased by only 2.03%. On the other hand, the proportion of respondents who regard cigarettes as a tertiary necessity has increased to 6.36%. This demonstrates that the pricing instrument has a significant influence on how people categorize cigarettes in terms of their life necessities. Nonetheless, the drop in people allocating cigarettes as priority and secondary needs remains small, implying that the policy of increasing the cigarette excise has had little effect on cigarettes' place in the hierarchy of living necessities of cigarette consumers. As a result of the increase in cigarette excise tax, the place of cigarettes within the hierarchy of life's essentials has shifted, as depicted in Figure 5.

Figure 5 reveals that 335 respondents (85.02%) indicated that the place of cigarettes in the hierarchy of consumers' necessities of existence tended to remain stable when cigarette costs were increased by excise instruments. Due to the excise policy, public consumption is maintained at a consistent level. This phenomenon implies that despite the price increase, cigarettes remain relatively affordable for the general populace. The Central Statistics Agency says that the Indonesian people's expenditure on cigarettes and tobacco has remained stable, even increasing from 2017 to 2019, when individuals can spend an average of IDR 69,413 per capita per month on tobacco consumption [2]. This condition demonstrates that cigarettes are inelastic items for cigarette customers, implying that cigarette consumption will continue despite the increase in cigarette taxation. Of course, this is backed by the fact that cigarettes contain addictive chemicals that might result in dependence. This reliance has succeeded in elevating cigarettes to the level of substantial necessities of life, such that their place in the hierarchy of consumer necessities of life has remained relatively stable despite the implementation of the policy of increasing cigarette excise.

Cigarettes are viewed as a tertiary necessity by the majority of people in their hierarchy of life requirements. However, as illustrated in Figure 4, government spending on cigarettes has outpaced government investment on fundamental requirements. This means that there is a possibility that cigarettes' position in the hierarchy of living necessities will shift from tertiary to secondary and perhaps primary needs as a result of the government's predominance in spending on tobacco goods relative to addressing basic needs.

3.1.5. Changes in allocation of smoking time

Increased cigarette excise taxes are intended to diminish the intensity of public cigarette use, hence reducing the public's time allocation for smoking. Consumers should spend less time smoking cigarettes if they receive fewer cigarettes. Figure 6 presents changes in smoking time allocation as a result of the cigarette tax increase.

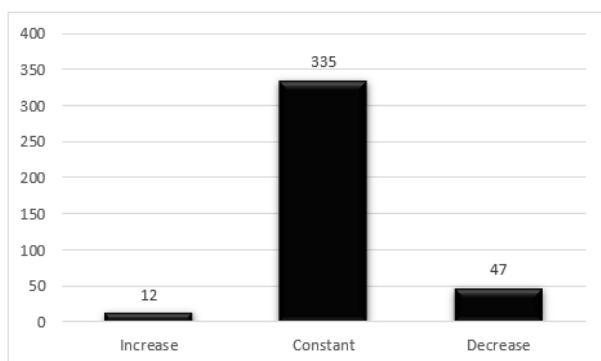


Figure 5. Changes in the position of cigarette in the level of necessities of life according to their intensity following the cigarette excise hike

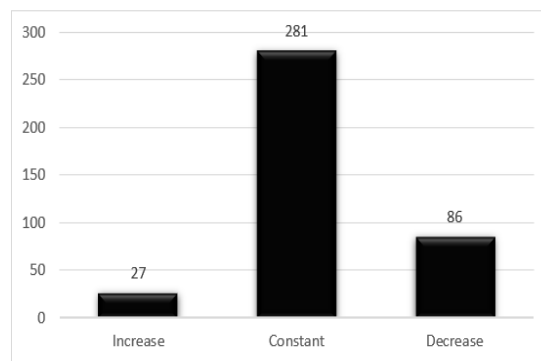


Figure 6. Changes in the smoking time allocation in the aftermath of the cigarette excise hike

However, there is no discernible change in the level of people's cigarette consumption, as measured by smoking interest, degree of cigarette consumption, allocation of cigarette spending, and the place of cigarettes in human life strata. The majority of respondents (71.3%) have not noticed a difference in the amount of time they spend smoking in their daily lives, according to Figure 6. As a result, the majority of people's time allocation for smoking remains stable.

3.2. Unexpected effects of the cigarette tax increase

3.2.1. Smokers seek for illegal cigarette (no excise)

Although the cigarette excise increases the cigarette's price in general, most of the respondents are not considering changing their choice of cigarettes. Among 394 respondents, 205 (52%) of respondents decide to maintain their consumption as present. Though the price may gradually and continuously increase over time, the majority of respondents prefer to increase or find other sources of income, so they could manage their consumption of cigarettes. The primary reason for maintaining the current cigarette is due to the flavor of the cigarette. Respondents believe if they changed their choice into illicit cigar, it would not satisfy their needs. In this sense, cigarettes become a necessity. It could only, and only, be consumed if they fulfill certain standards as mentioned by the respondents (flavor, aroma, ingredients, and so on). Figure 7 illustrates the proportion of smokers who seek contraband cigarettes (without excise tax) as a result of the increase in cigarette excise tax.

On the brighter side, 56 (14%) respondents considered seeking illicit cigarettes. Primary consideration is the price of the cigarette itself. If the price hikes beyond their financial capability, switching into illicit cigarettes is considered as an option. Though in some cases, some respondents also switch into much more expensive cigarettes (further discussed on Figure 8). Respondents tend to upgrade their choice of consumption, rather than paying a higher price for the same quality. These phenomena also support the idea that cigarettes become a necessity in respondents' daily needs. Considerations also should be put into the other 55 (13.9%) respondents that are still uncertain of their options. If not carefully maintained, there is always a possibility for them to seek illicit cigarettes.

Based on the data gathered, increasing excise as a part to minimize cigarette consumption should be carefully reviewed. More than half of the respondents firmly decided that they would continue to consume,

though the price is “of the roof”. Further research needs to be done in different settings, mainly to see correlation, while also regression in order to measure impact of excise through cigarette consumption. Even more, the next part of the data shown certain peculiar finding regarding the respondent’s behavior on cigarette consumption.

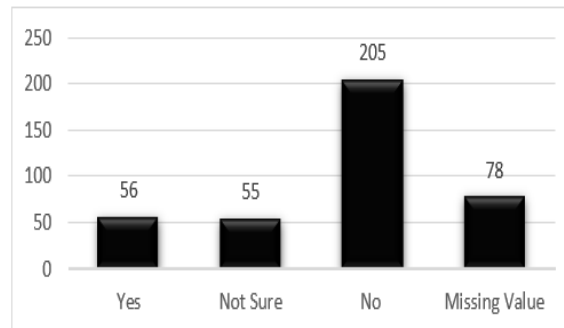


Figure 7. The proportion of smokers who seek illicit cigarettes (without excise duty) in the aftermath of the cigarette excise hike

3.2.2. Smokers vary the type or brand of cigarettes based on financial resources

Figure 8 shows that the tendency of respondent to make certain adjustments after excise has been applied. Most of the respondents (54%) showed that they switch to a lower price. Though lower price cigarettes may not satisfy their needs, respondents tend to endure the quality of the lower price cigarettes. In this sense, cigarettes are still a necessity. It is better to smoke some, rather than not smoking at all. Figure 8 illustrates the proportion of smokers who alter the brand and price of cigarettes in response to the rise in cigarette excise tax.

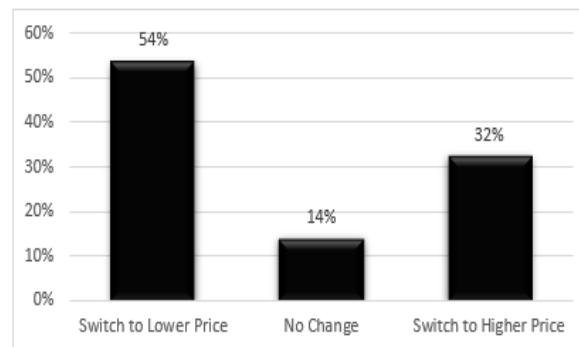


Figure 8. The proportion of smokers who make adjustments to the brand and price of cigarettes after the increase in cigarette excise

On the other side, 32% of the respondents decide to switch to a higher price. As Illustrated on the previous section, respondents tend to switch into higher prices based on their cost-benefit analysis. If certain Brand A increased their price though maintaining the same quality, while approaching the price of Brand B with higher or premium quality, respondents choose to consume brand B instead. Rather than paying more for getting “the usual”, 34% respondents choose to upgrade and “pay more to get more”. Paying a higher price for the same cigarettes is considered not benefitting, and it was believed to cause them more loss rather than benefit. In this sense, though more research needs to be done, there might be a positive correlation between excise and cigarette consumption. Hypothetically, with the increase of excise, there might be an increase in cigarette consumption.

Last but not the least, the 14% of respondents also needs to be carefully reviewed. Though the price may change, the respondents seemed to be loyal to a certain brand. This data showed a certain tendency of

respondents could be addicted to certain brands, and may provide further challenges than the two. Further research needs to be done, but based on the data, there might be a possibility that these respondents may not stop consuming cigarettes, no matter if excise is applied to the cigarettes' price. Ultimately, these 14% of respondents might be a living proof to show that excise has no impact at all to reduce cigarette consumption.

3.2.3. Cigarette addiction has not changed

Furthermore, to see whether excise would affect the respondents' consumption on cigarettes, Figure 9 showed the summary on respondents' dependency toward cigarette consumption after excise is applied. About 296 of 394 respondents showed that their dependency remained constant. In this sense, whether excise is applied or not, consumption of cigarettes would still remain the same. Changes in tobacco dependence in response to an increase in cigarette excise are depicted in Figure 9.

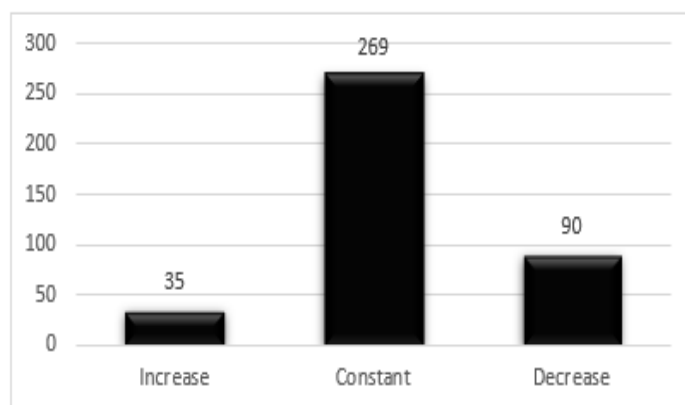


Figure 9. Changes in cigarette dependency following an increase in cigarette excise

There are many other factors that may contribute to this constant dependency. Some respondents believed that consuming cigarette is a lifestyle that they needed to regularly consume cigarettes to be accepted by certain social groups. Some believe that there are positive effects after consuming cigarettes, such as relieving stress, increase in focus, et cetera. This finding is consistent with Enjelita and Helga's qualitative study, which found that while the majority of participants perceived smoking as a health risk, they reduced their risk perceptions of smoking-related diseases as a result of positive feelings about perceived current benefits of smoking and personal justification for smoking [31]. Some others maintained the habit as part of their addiction, while ultimately, putting cigarettes as their daily necessities and prime commodity. Based on in-depth interviews conducted, some respondents allocate more funds for cigarettes rather than dairy products, poultry, or even carbohydrates.

On the positive side, 90 respondents showed a certain decrease of dependency on cigarettes. Respondents simply couldn't afford to purchase cigarettes, which forced them to find other replacements for their addiction. In this sense, there is always a possibility of side effects from regularly consuming cigarettes into not consuming cigarettes at all. Further research needs to be done, to see if the sudden cessation may affect them psychologically or even physically. Increase of excise may reduce cigarette consumption, but may also invite more challenges to recover smokers from their addiction.

In the end, 35 respondents that showed an increase in dependency should be studied furthermore. Certain control variables need to be reviewed, such as age, sex, occupation and so on, to determine whether this increase applicable in general or only shown in certain specific groups. In order to determine the net impact of excise on cigarette consumption, multiple regression analysis needs to be done. The result of the analysis then could be used as a basis to design precise excise policy in reducing cigarette consumption.

3.3. How effective is the cigarette excise increase in lowering consumption?

A policy of increasing the cigarette excise tax rate should have been implemented to reduce cigarette use. The World Health Organization advised that the government increase the excise tax on cigarettes by up to 70% in order to increase the price of cigarettes and progressively reduce smoking consumption [4]. As previously noted, Thailand and the Philippines have both succeeded in making cigarette excise tax policy the major regulator affecting cigarette prevalence [32]. In comparison to Indonesia, the cigarette excise tax rate has changed consistently during the last few years [33] but the affordability index has

not changed significantly. Due to these modest changes, the usefulness of the cigarette excise tax is questioned, as it does not influence people's behavior to quit smoking.

Numerous elements can influence the policy effectiveness in Indonesia. According to Knoepfel, policy effectiveness may be quantified in two dimensions: policy impact and policy outcome [14]. For that point, the Knoepfel indicators theory used in this research should be reorganized and compared to actual facts and difficulties other than the price itself in order to explain the increased cigarette excise tax's effectiveness from policy impact dimension.

3.3.1. Quantitative evaluation

Quantitative evaluation determines if desired changes are visible in all instances when implementation measures are taken [14]. Quantitative evaluation is used to examine or measure the effectiveness of a policy by undertaking substantial evaluative research. Evaluative research is a process of design and evaluation that involves systematic data collection and analysis in order to ascertain the value or benefits of a policy practice. Quantitative evaluation is used to demonstrate that the policy is on track.

This study conducted a quantitative analysis of several indicators, including changes in cigarette consumption, changes in the allocation of spending on cigarettes, changes in the position of cigarettes in the hierarchy of life necessities according to intensity, changes in the allocation of smoking time, and the tendency of smokers to seek illegal cigarettes (no excise). The quantitative evaluation findings were derived from the survey data of 394 respondents, as indicated in Figure 10. As many as 41% of 394 respondents demonstrated ineffective results, 40% (158 respondents) demonstrated fewer effective results, 14% (55 respondents) demonstrated moderately effective results, and 5% (21 respondents) demonstrated effective results. This suggests that the 12.5% increase in the excise tax on cigarettes has had no effect on reducing cigarette consumption as indicated by quantitative indicators.

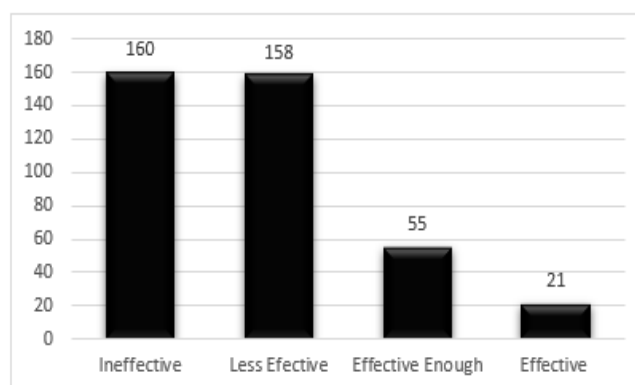


Figure 10. The cigarette excise increase policy's impact from quantitative indicators

In principle, a rise in cigarette excise that increases the price of cigarettes is predicted to lower public consumption, as the theory of demand argues that when the price of an item increases, the quantity requested of the item decreases, provided other factors remain constant [26]. However, the fact is that a rise in cigarette prices has little effect on cigarette consumption reduction since cigarette prices remain cheap in comparison to people's wages. Another critical thing to consider is that the majority of smokers already have an addiction to cigarettes as a result of the addictive compounds included in them. Even if the price increases, smokers will attempt to continue purchasing it, even if it means foregoing other necessities. As a result, one could argue that the demand for cigarettes is inelastic.

The results of these quantitative indicators demonstrate the ineffectiveness of the policy of increasing the cigarette excise tax, as there is no change in the number of cigarettes consumed, the allocation of spending on cigarettes, the position of cigarettes in the hierarchy of necessities of life, and the allocation of smoking time. The vast majority of people make no attempt to seek illegal cigarettes. In other words, nothing changes.

3.3.2. Qualitative evaluation

A qualitative evaluation was conducted following the rise in the cigarette excise tax on numerous variables, including changes in interest in smoking, adjustment of types or brands of cigarettes to budget

allocations, and changes in cigarette addiction. The quantitative evaluation findings were derived from the survey data of 394 respondents, as indicated in Figure 11.

As many as 63% of 394 respondents had quite effective results, 27% (107 respondents) had effective results, 8% (30 respondents) had fewer effective results, and 2% (9 respondents) had ineffective results. According to three qualitative indicators, a 12.5% increase in cigarette excise duty has a moderate effect on lowering cigarette usage. The rise in cigarette excise has an effect on only one of the three qualitative indicators: behavioral changes in cigarette brand selection in response to cheaper price. According to Figure 8, 54% of respondents indicated a desire to switch to a lower-priced cigarette. While the other two indicators, namely interest in smoking and cigarette dependence, are assumed to be constant. In other words, little change occurred as a result of qualitative indicator measurement. Cigarette prices that remain diversified and affordable are what continue to provide an opportunity for the cigarette excise to fail to curb cigarette consumption.

3.3.3. The cigarette excise increase policy's effectiveness from policy impact dimension

The impact of a policy is the total change in the behavior of a target population, whether expected or not [14]. In connection to the policy of increasing the cigarette excise, the expected changes are related to the positive impacts, such as reducing cigarette consumption and smoking prevalence in the community. Meanwhile, the unexpected changes are attributable to the massive distribution of illegal cigarettes in order to meet consumer demand induced by the increase in smoking due to high excise. The dimensions of policy impact can be quantified through the use of quantitative and qualitative indicators. Evaluating a policy's impact entails a methodical comparison of the consequences that should have occurred based on the plan's assumptions and the actual impacts. Through study of each of these indicators, the effectiveness of the policy in terms of the dimensions of the policy impact can be seen in Figure 12.

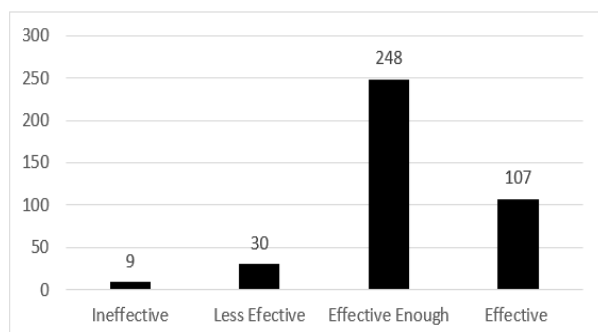


Figure 11. The cigarette excise increase policy's impact from qualitative indicators

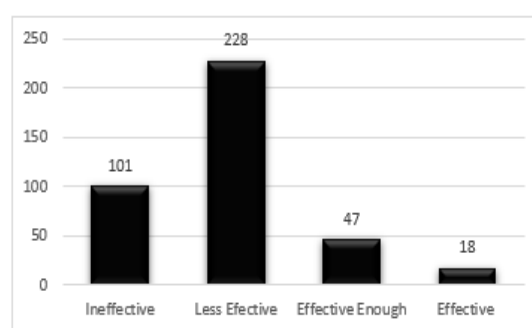


Figure 12. The cigarette excise increase policy's effectiveness from policy impact dimension

As many as 58% of 394 respondents showed fewer effective results. 26% (101 respondents) showed ineffective results, 12% (47 respondents) showed moderately effective results, and 5% (18 respondents) showed effective results. This means that the policy of increasing the cigarette excise tax by 12.5% has a less effective impact on reducing cigarette consumption. The findings of this study are compatible with the results of independent measurements of each indicator. The 12.5% increase in the cigarette excise tax in 2021 has had no effect on cigarette usage, as prices remain accessible for both workers and non-workers. This remains consistent with the findings of Prasetyo & Adrison [10] and Santoso & Erlando [12] in 2020, adding to the growing body of evidence recommending that cigarette costs be increased even further in order to minimize cigarette consumption. Average public expenditures on cigarettes are shown in Figure 13.

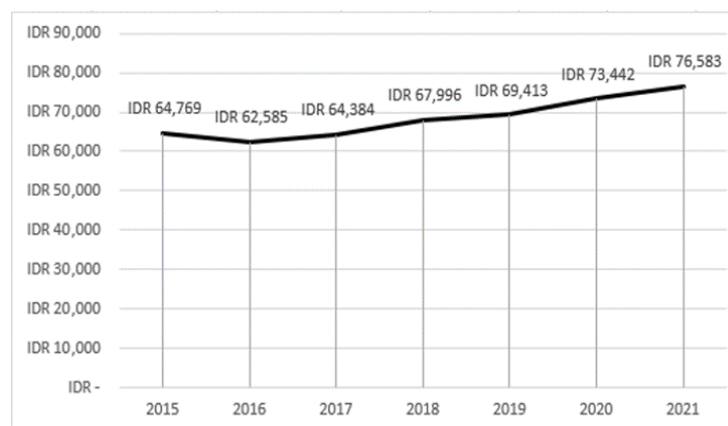


Figure 13. Average public expenditure on cigarettes. Secondary data processed from central statistics agency, (2015-2021) [2], [22]

Furthermore, the addictive nature of cigarettes causes smokers to continue prioritizing cigarette requirements above other essential needs. Thus, as illustrated in Figure 13, the budget allocation for cigarette consumption tends to increase year after year. In addition, the social milieu makes it harder for smokers to quit.

3.4. Contributing variables in the policy effectiveness

In practice, increasing the excise tax on cigarettes has had no effect on lowering public cigarette consumption. Numerous reasons contribute to the policy's ineffectiveness. It can be including the following:

3.4.1. Price factor: cigarette prices are still affordable

The increase in cigarette excise tariffs is aimed at increasing the selling price of cigarettes in the community so that people are expected to limit their cigarette consumption. Indeed, the public responded to the policy of increasing the cigarette excise tax by altering their cigarette consumption patterns in accordance with their income. Cigarette customers adjust their cigarette consumption according to their financial level. When consumers have a high income, they will purchase cigarettes at a higher price, and vice versa. As a result, the public can control the affordability of cigarettes based on their financial situation.

The average person's income rises faster than the price of cigarettes

In some low-and middle-income countries, income growth outpaces the price of cigarettes, making cigarettes more affordable. This phenomenon is corroborated by data from the WHO's 2019 Global Tobacco Epidemic Report, which indicates that Indonesia is one of the Asia-Pacific region's countries with the lowest cigarette prices in 2018 (Table 1). This is due to both the regular increases in excise and cigarette prices that Indonesia implements while remaining below the rate of inflation and the increase in the level of people's incomes [12]. Meanwhile, in a number of high-income countries, the overall increase in household income was followed by an increase in cigarette excise, ensuring that the increase in cigarette prices remained greater than the overall increase in household income [33].

The Complexity of the Cigarette Excise Structure

The affordability of cigarettes in Indonesia is further influenced by the intricacy of the country's excise structure, which is primarily intended to benefit small producers. However, this complex structure improves the manufacturing of tobacco goods on the market, allowing for a diverse range of tobacco products at a range of prices. This allows cigarette buyers to select the type of cigarette that is most affordable for them.

Adjusting the community's cigarette consumption pattern also entails reallocating their expenditure needs. This relates to cigarettes' position in the cigarette consumer's hierarchy of life necessities. While the majority of cigarette consumers believe that cigarettes are a tertiary need, the fact that cigarettes include ingredients that induce consumers to develop dependence makes cigarettes an inelastic good for certain people, such that price increases have little effect on general consumption. With this state of dependence, the community's need for cigarettes has the potential to transition to a major need. According to statistics, there has been a shift in the allocation of public expenditure to accommodate their desire for cigarettes, notably in

the expenditure sector for basic dietary needs. Thus, it is difficult for people who are habitually smokers to reduce their cigarette usage to the point where excise taxes have no effect on their purchasing power.

According to the pricing factor, increasing cigarette tax rates did not result in a reduction in public cigarette usage. This implies that, despite frequent rises in cigarette tax rates, the selling price of cigarettes has remained affordable for most people. Thus, when considering the price component, this legislation had no effect on lowering the amount of public cigarette consumption.

3.4.2. Non-price factor

Due to the nature of the dependence induced by cigarettes, cigarettes become a necessary evil

Apart from the affordability of cigarette pricing, the majority of people remain relatively reliant on cigarette consumption despite the increase in cigarette excise. This is due to the presence of addictive chemicals, which make it difficult for smokers to cut back on their intake even as prices rise. The reaction to the addictive chemicals found in cigarettes has a very active effect on the human central nervous system. Thus, the longer and more frequently someone smokes, the more difficult it is to quit [13].

For the majority of smokers, nicotine has unintentionally been used to control them as a chemical that causes physical and psychological dependence. Because the nicotine in cigarettes has been shown to improve the mood, promote pleasant feelings, and induce calm, smokers tend to increase their daily cigarette consumption. The satisfaction derived from cigarette use subsequently develops into an addiction, which results in uneasiness and anxiety if cigarette consumers stop smoking [31].

Smokers' psychological benefits are deemed to outweigh their expenses or losses

By and large, smokers believe that smoking has a beneficial effect on mental health. Indeed, there is a nicotine withdrawal phenomenon, which is a state in which a nicotine-dependent body experiences symptoms such as sensitivity, irritability, insomnia, anxiety, and increased appetite when nicotine is not consumed [33]. When smokers abstain from tobacco for an extended period of time, they experience unpleasant symptoms such as sensitivity, irritability, anxiety problems, and even melancholy. Smoking alleviates these symptoms, creating the notion among smokers that smoking has psychological benefits.

The majority of people believe that the psychological and physical benefits of smoking outweigh the costs incurred by consumers. With inexpensive rates, smoking is believed to boost self-esteem, pay attention, give tranquility, and alleviate tension. In addition, individuals feel that they have not had any negative impacts. In fact, just because an impact has not been felt does not mean it does not exist [25].

The social environment's influence, specifically from parents and peers

Most cigarette consumers live in a social setting where smoking is prevalent. As a result, people tend to emulate the habits prevalent in their immediate environment. For instance, in a family context where smoking is prevalent, it is natural for youngsters to adopt their parents', siblings', or relatives' smoking habits. [16]. As a result, smoking habits will persist throughout the social context. All of these non-price considerations are essentially assumptions or personal beliefs of smokers that can be contradicted by genuine health and psychological data. The government must conduct education on a regular and continual basis in order to eradicate this erroneous mentality.

4. CONCLUSION

The data indicated that a 12.5% increase in the cigarette excise charge had a negligible effect on reducing cigarette consumption. The affordable price of cigarettes; the nature of the dependence caused by cigarettes makes cigarettes a necessity that must be fulfilled; the psychological benefits obtained by smokers are considered to be greater than the costs or losses; and the influence of the social environment, namely from parents and peers who have a smoking habit are some of the ineffective factors of the policy of increasing cigarette excise. As a fiscal instrument for mitigating cigarette consumption's negative externality, it is proposed that the cigarette excise tax be increased to a level that has a considerable effect on cigarette pricing, with the goal of making cigarettes increasingly unaffordable. Cigarette excise increases are expected to have a significant influence on pricing, increasing it by at least 25%, depending on inflation and consumer income. According to the study's findings, cigarettes are becoming prohibitively expensive for the community, with a minimum price of IDR 50,000.

The findings of this research led to the identification of an intriguing area for further research: i) At what price point in each country do cigarettes become an expensive and unaffordable product for the majority of people?; ii) How to simplify the excise tax structure in order to achieve the goal of lowering cigarette consumption? This is obviously tied to the percentage level of cigarette excise included in cigarette costs.

ACKNOWLEDGEMENTS

The author would like to thank the members of the Fiscal 2 Group in Administration Research Method at the Faculty of Administrative Sciences, Universitas Indonesia, for providing data and writing for this study. This publication also supported by Directorate of Research and Development, Universitas Indonesia under PUTI Grant–Social Humanities 2020.



REFERENCES

- [1] M. Mirawati, N. Nurfitriani, F. M. Zulfiarini, and W. H. Cahyati, "Smoking behavior in 13-14 years old teenagers," *HIGEIA (Journal of Public Health Research and Development)*, vol. 2, no. 3, pp. 396–405, 2018, doi: 10.15294/higeia/v2i3/26761.
- [2] Central Bureau of Statistics, "Public expenditure on cigarettes increasingly since 2017," *Databoks Pusat Data Ekonomi dan Bisnis Indonesia*, 2021. <https://databoks.katadata.co.id/datapublish/2021/09/23/pengeluaran-masyarakat-untuk-rokok-semakin-meningkat-sejak-2017> (accessed Feb. 01, 2022).
- [3] A. L. Nyman *et al.*, "Associations between COVID-19 risk perceptions and smoking and quitting behavior among U.S. adults," *Addictive Behaviors Reports*, vol. 14, pp. 1–10, Dec. 2021, doi: 10.1016/j.abrep.2021.100394.
- [4] World Health Organization, "Raising tobacco taxes and prices for a healthy and prosperous Indonesia." World Health Organization, Jakarta, 2020. [Online]. Available: https://cdn.who.int/media/docs/default-source/searo/indonesia/indonesia-tobacco-tax-paper-2020.pdf?sfvrsn=67c3d89a_2
- [5] Ministry of Finance, "Fiscal & economic updates october 2021." Ministry of Finance, Jakarta. [Online]. Available: https://fiskal.kemenkeu.go.id/files/red/file/1635902875_r8_fpa_red_october_edit.pdf
- [6] F. J. Chaloupka, A. Yurekli, and G. T. Fong, "Tobacco taxes as a tobacco control strategy," *Tobacco Control*, vol. 21, no. 2, pp. 172–180, Mar. 2012, doi: 10.1136/tobaccocontrol-2011-050417.
- [7] M. N. Afif and H. Sasana, "The effect of poverty, per capita income, cigarette prices, cigarette production on cigarette consumption in Indonesia," *Diponegoro Journal of Economics*, vol. 9, no. 1, pp. 88–96, 2019, [Online]. Available: <https://ejournal2.undip.ac.id/index.php/dje/article/view/3799>
- [8] F. J. Chaloupka, L. M. Powell, and K. E. Warner, "The use of excise taxes to reduce tobacco, alcohol, and sugary beverage consumption," *Annual Review of Public Health*, vol. 40, no. 1, pp. 187–201, Apr. 2019, doi: 10.1146/annurev-publhealth-040218-043816.
- [9] L.-M. Ho, C. Schafferer, J.-M. Lee, C.-Y. Yeh, and C.-J. Hsieh, "Raising cigarette excise tax to reduce consumption in low-and middle-income countries of the Asia-Pacific region: A simulation of the anticipated health and taxation revenues impacts," *BMC Public Health*, vol. 18, no. 1, pp. 1–9, Dec. 2018, doi: 10.1186/s12889-018-6096-z.
- [10] B. W. Prasetyo and V. Adrison, "Cigarette prices in a complex cigarette tax system: Empirical evidence from Indonesia," *Tobacco Control*, vol. 29, no. 6, pp. 618–623, Jun. 2020, doi: 10.1136/tobaccocontrol-2018-054872.
- [11] Y. Vanessa and M. Murwendah, "The structure of state levies on tobacco: A comparative study of Indonesia and Thailand," *BISNIS & BIROKRASI: Jurnal Ilmu Administrasi dan Organisasi*, vol. 26, no. 3, pp. 145–155, Apr. 2020, doi: 10.20476/jbb.v26i3.10876.
- [12] D. B. Santoso and A. Erlando, "Tobacco excise tax policy in Indonesia: Who does reap the benefits?," *Entrepreneurship and Sustainability Issues*, vol. 8, no. 1, pp. 1108–1121, Sep. 2020, doi: 10.9770/jesi.2020.8.1(74).
- [13] U. Sumarwan, *Consumer behavior: Theory and its application in marketing*, 4th ed. Jakarta: Ghalia Indonesia, 2017.
- [14] P. Knoepfel, *Public policy resources*. Bristol: Policy Press, 2018.
- [15] H. Limanseto, "Tobacco products industry innovation and technology development," *Coordinating Ministry for Economic Affairs of the Republic of Indonesia*, 2021. <https://www.ekon.go.id/publikasi/detail/3497/pengembangan-inovasi-dan-teknologi-industri-hasil-tembakau> (accessed May 25, 2022).
- [16] S. Alfariy, A. Agrina, and W. Lestari, "The effectiveness of health education on increasing adolescent knowledge about the impact of smoking," *Jurnal Online Mahasiswa Program Studi Ilmu Keperawatan Universitas Riau*, vol. 1, no. 1, pp. 1–9, 2014, [Online]. Available: <https://www.neliti.com/publications/187620/efektifitas-pendidikan-kesehatan-terhadap-peningkatan-pengetahuan-remaja-tentang#cite>
- [17] G. V. Nizamie and A. Kautsar, "Analysis of factors affecting cigarette consumption in Indonesia," *Kajian Ekonomi dan Keuangan*, vol. 5, no. 2, pp. 158–170, Nov. 2021, doi: 10.31685/kek.v5i2.1005.
- [18] E. Blecher and C. Van Walbeek, "An analysis of cigarette affordability," *Alliance Framework Convention*, 2009. https://fctc.wpengine.com/wp-content/uploads/2015/04/price_tax_cigarette_affordability.pdf (accessed May 19, 2022).
- [19] World Health Organization, "WHO report on the global tobacco epidemic 2021: Addressing new and emerging products." World Health Organization, Geneva, 2021.
- [20] CEIC, "Indonesia monthly earnings, 1991-2022," *CEIC Data*, 2021. <https://www.ceicdata.com/id/indicator/indonesia/monthly-earning> (accessed May 21, 2022).
- [21] Seatca Tobacco Tax Program, "The overall progress of tobacco tax policy implementation in Indonesia, Thailand, and Singapore," *tobacco.seatca*, 2021. <https://tobaccotax.seatca.org/> (accessed May 21, 2022).
- [22] Centers for Disease Control and Prevention, "Economic trends in tobacco," *CDC*, 2021. https://www.cdc.gov/tobacco/data_statistics/fact_sheets/economics/econ_facts/index.html (accessed May 25, 2022).
- [23] H. Nurhayati-Wolff, "Average retail price of a packet of white cigarettes in Indonesia from 2011 to 2020," *Statista*, 2021. <https://www.statista.com/statistics/1182176/indonesia-average-retail-price-of-a-packet-of-cigarettes/> (accessed May 21, 2022).
- [24] Ministry of Industry of the Republic of Indonesia, "Tobacco products industry absorbs 5.98 million workers," *Ministry of Industry of the Republic of Indonesia*, 2019. <https://kemenperin.go.id/artikel/20475/Industri-Hasil-Tembakau-Tercatat-Serap-5,98-Juta-Tenaga-Kerja> (accessed May 25, 2022).
- [25] E. Hanafi *et al.*, "Alcohol-and cigarette-use related behaviors during quarantine and physical distancing amid COVID-19 in Indonesia," *Frontiers in Psychiatry*, vol. 12, pp. 1–9, Feb. 2021, doi: 10.3389/fpsy.2021.622917.
- [26] N. G. Mankiw, *Principles of economics*, 8th ed. Boston: Cengage Learning, 2018.
- [27] Central Bureau of Statistics, "After food, Indonesian people spend a lot to buy cigarettes in 2021," *Databoks Pusat Data Ekonomi dan Bisnis Indonesia*, 2021. <https://databoks.katadata.co.id/datapublish/2021/11/04/setelah-makanan-pengeluaran-masyarakat-indonesia-banyak-untuk-beli-rokok-pada-2021#:~:text=Rata-rata pengeluaran rokok dan,di antara kelompok pengeluaran lainnya> (accessed Jan. 25, 2022).
- [28] A. R. Hosseinpoor, L. A. Parker, E. T. d'Espaignet, and S. Chatterji, "Socioeconomic inequality in smoking in low-income and middle-income countries: results from the world health survey," *PLoS ONE*, vol. 7, no. 8, pp. 1–8, Aug. 2012, doi:




- 10.1371/journal.pone.0042843.
- [29] The International Union Against Tuberculosis and Lung Disease, "Tobacco control factsheet 8: Tobacco and poverty," *The Union*, 2015. <https://theunion.org/sites/default/files/2020-08/FS8 - Tobacco and Poverty 2015.pdf> (accessed May 21, 2022).
- [30] R. Nasrudin, L. Trialdi, D. Hartono, and A. Ahsan, "Tobacco economic of Indonesia: Poor households' spending pattern, tax regressivity and economic wide impact of tax simplification," *Working Papers in Economics and Business*, vol. 3, no. 2, pp. 1–24, 2013, [Online]. Available: <http://ideas.repec.org/p/lpe/wpecbs/201302.html>
- [31] E. M. Ndoen and H. J. N. Ndun, "Risk perception of smokers on graphic warning labels: A qualitative study in East Nusa Tenggara, Indonesia," *International Journal of Public Health Science (IJPHS)*, vol. 11, no. 2, pp. 457–464, Jun. 2022, doi: 10.11591/ijphs.v11i2.21216.
- [32] T. Y. Lian and U. Dorotheo, *The ASEAN tobacco control atlas*, 2nd ed. Bangkok: Southeast Asia Tobacco Control Alliance (SEACTA), 2014.
- [33] A. Karnadi, "How much cigarette excise increases each year?," *Data Indonesia.id*. <https://dataindonesia.id/bursa-keuangan/detail/berapa-kenaikan-cukai-rokok-setiap-tahunnya> (accessed May 25, 2022).

BIOGRAPHIES OF AUTHORS






Neni Susilawati    is a permanent lecturer in the Department of Fiscal Administration at the Faculty of Administrative Sciences of the Universitas Indonesia (FIA UI), as well as a researcher in the Tax Governance and Accountability Research Cluster. Neni is also a doctoral candidate at the FIA UI Postgraduate, with a specialty in Tax Administration and Policy. She received a master's degree in Tax Administration and Policy from the Universitas Indonesia in 2012. She obtained a bachelor's degree in Fiscal Administration Science from the Universitas Indonesia in 2007. Neni's research focuses on personal income taxation, withholding taxation, tax payer behavior, and tax administration and policy. His scholarly work has appeared in national and international journals as well as international proceedings. Additionally, Neni has worked as an associate with a tax consulting firm and as a tax specialist for a multinational private corporation. Neni is a member of the International Fiscal and Tax Administration Association (IFTAA) and the Association of Indonesian Dynamic System Experts (ASDI). She can be contacted at email: neni.susilawati31@ui.ac.id.






Daffa Abyan    is an undergraduate of Fiscal Administrative Science in Universitas Indonesia. While in college Abyan was involved with several research projects concerning the all kind of taxes in Indonesia and also was part of lecturer assistant in administrative research method. He was also part of several student organization and part of joint research project of GIZ about the green budget. Right now, he worked at one of the tax consulting in Indonesia in the field of tax compliance. He can be contacted at email: abyandaffa06@gmail.com.



Sabrina Cristalia Aruan    is a penultimate student of Fiscal Administrative Science in Universitas Indonesia. In college, Sabrina along with her seniors led one of the cores of student-oriented organizations in Faculty of Administration Universitas Indonesia, fiscal student association KOSTAF FIA UI. She also participated as official delegate representing Universitas Indonesia at the annual national conference held by Indonesian Taxation Student Association (ITSA) Fourth National Conference discussing about AD/ART and its upcoming agenda. Currently, she is doing her internship program at one of the tax consulting in Indonesia. She can be contacted at email: aruan.sabrina710@gmail.com.



Marcel Angwyn    is a Lecturer at the Faculty of Administrative Science Universitas Indonesia. Marcel earned his bachelor degree from Public Administration Science at Faculty of Social and Political Sciences in 2015 and the master degree from Graduate School of Public Administration at Seoul National University in 2021. Until now, Marcel is actively engaged in teaching and various research. The research areas that Marcel has focused on so far include human resource management in the public sector, governance, and bureaucratic reform. Currently, Marcel also serves as Coordinator of Academic and International Cooperation of the Faculty of Administrative Science, Universitas Indonesia. He can be contacted at email: marcelangwyn@ui.ac.id.