



The Effect of Cigarette Taxes on Cigarette Consumption Behavior in Indonesia

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ABSTRACT

Cigarette consumption in Indonesia remains relatively high despite the government's implementation of cigarette excise tax policies as fiscal instruments and consumption control measures. This study aims to analyze the effect of cigarette excise taxes on smoking consumption behavior in Indonesia. The research employs a literature review method with a descriptive-analytical approach, utilizing secondary data from publications of the Ministry of Finance and scholarly journals that examine the relationship between cigarette prices, income levels, and consumption patterns. The findings indicate that increases in cigarette excise taxes, which lead to higher cigarette prices, tend to reduce consumption levels, particularly among low-income groups and light smokers. However, the impact is relatively smaller among higher-income groups. Therefore, cigarette excise taxes are shown to influence changes in smoking consumption behavior, although their effectiveness still requires supporting policies to ensure a more equitable and comprehensive impact.

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INTRODUCTION

Cigarettes are a commodity that has a significant impact on public health, society, and the economy in Indonesia. Cigarette consumption contributes to an increase in non-communicable diseases such as heart disease, stroke, lung cancer, and chronic respiratory disorders, which ultimately leads to an increase in national health costs and a decline in labor productivity. Nationally, Indonesia is one of the countries with the highest number of smokers in the world (Permana et al., 2023). The 2018 Basic Health Research (Riskesdas) data shows that the prevalence of smokers aged ≥ 15 years reached 33.8%, with a prevalence of 62.9% among men and 4.8% among women. In addition, the prevalence of smokers aged 10–18 years increased from 7.2% in 2013 to 9.1% in 2018, indicating a serious problem in controlling cigarette consumption from an early age (Riskesdas, 2018).

The high prevalence of smokers has prompted the government to implement various measures to control cigarette consumption, one of which is through fiscal policy in the form of imposing and increasing tobacco excise taxes (Farhatunnissa et al., 2024). Tobacco excise tax has a dual function, namely as a source of state revenue and as an instrument to control the consumption of goods that have a negative impact on public health. Based on data from the Ministry of Finance of the Republic of Indonesia, state revenue from tobacco excise taxes has continued to increase, from around IDR 172 trillion in 2019 to more than IDR 213 trillion in 2022. This increase in revenue reflects the significant contribution of cigarette excise taxes to the state budget, but at the same time indicates that cigarette consumption in the community is still relatively high.

In economic theory, an increase in excise tax rates will raise cigarette prices in the market, which in turn is expected to reduce demand through the mechanism of price elasticity. However, in the Indonesian context, the effectiveness of cigarette excise policies remains a matter of debate (Farhatunnissa et al., 2024).

On the one hand, the increase in cigarette prices has the potential to reduce consumption, especially among low-income groups and teenagers. On the other hand, the addictive nature of smokers in Indonesia, the availability of cheap cigarettes, and the shift in consumption to lower-priced brands may reduce the effectiveness of this policy. This issue has become a national concern because high cigarette consumption is still directly proportional to the increasing cost of the National Health Insurance (JKN) and economic losses due to lost productivity.

Several previous studies have examined the relationship between cigarette taxes, cigarette prices, and consumption. Research by Chaloupka et al. (2015) states that increases in taxes and cigarette prices significantly reduce cigarette consumption, especially among adolescents and low-income groups, although the impact varies between countries (Chaloupka et al., 2012). In Indonesia, research by Suryani and Widodo (2019) shows that the increase in cigarette prices due to excise taxes has a negative effect on consumption, but the elasticity of demand for cigarettes is relatively inelastic, so the decline in consumption is relatively small. Another study by Adioetomo et al. (2020) confirms that cigarette excise tax policies are more effective in reducing smoking intensity than in completely stopping the habit of smoking.

However, most previous studies have focused on macro aspects, such as state revenue and aggregate health impacts. Studies that specifically analyze changes in smokers' consumption behavior as a direct response to excise policies, such as changes in the number of cigarettes consumed, brand switching, or reduced smoking frequency, are still relatively limited. Therefore, this study has an element of novelty by emphasizing the analysis of changes in people's consumption behavior due to cigarette excise policies based on a synthesis of empirical research results and fiscal policies applicable in Indonesia.

Based on this background, the main issue in this study is how cigarette excise policies affect cigarette consumption behavior in Indonesia. This study is expected to contribute academically by strengthening understanding of the effectiveness of cigarette excise as an instrument for controlling consumption, as well as providing material for consideration by the government in formulating more comprehensive tobacco control policies oriented towards public health.

METHOD

The research method used in this study is library research with a descriptive-analytical approach. This study utilizes secondary data obtained from various reliable sources, such as official publications from the Ministry of Finance of the Republic of Indonesia, national statistical reports, and reputable scientific journal articles that discuss the relationship between cigarette price increases due to excise policies, community income levels, and cigarette consumption behavior. The collected data was then analyzed descriptively to illustrate the development of cigarette excise policies and cigarette consumption trends in Indonesia, and then analyzed analytically to examine the relationship patterns and trends in consumption behavior changes in response to price changes. This approach was used to gain a comprehensive understanding of the effectiveness of cigarette excise policies as a consumption control instrument based on a synthesis of empirical research results and relevant economic theory frameworks.

RESULTS AND DISCUSSION

The Impact of Excise Tax Increases on Cigarette Prices and Consumption

The increase in cigarette excise tax imposed by the government has directly impacted cigarette prices in the market. Data from the Ministry of Finance of the Republic of Indonesia shows that tobacco excise tax rates have increased gradually each year, with an average increase of over 10% since 2018 (Marbun, 2025). The impact of this policy is reflected in the increase in retail cigarette prices, particularly for machine-rolled kretek cigarettes (SKM) and machine-rolled white cigarettes (SPM). However, despite the price increase, the aggregate national cigarette consumption rate remains relatively high, as reflected in the continued increase in excise tax revenue and the prevalence of smokers, which has not shown a significant decline (Arifin et al., 2023).

The increase in cigarette excise tax implemented by the government has led to higher cigarette prices in the market. Literature studies show that increases in cigarette prices generally encourage changes in consumption behavior, such as a reduction in the number of cigarettes smoked or a switch to cheaper cigarette products (Aulana et al., 2025). An empirical study of 34 provinces in Indonesia shows that every 1% increase in excise tax significantly reduces household cigarette consumption by around 1.056%, even though enforcement against illegal cigarettes has not been effective in reducing consumption levels.

In addition, preliminary research from the University of Indonesia shows that small increases in excise taxes and cigarette prices are relatively ineffective in reducing smoking prevalence. Smoking prevalence is projected to decline by only 0.84% with a simulated increase in cigarette prices to Rp31,590 per pack. National cigarette production data also shows a downward trend from 334.8 billion sticks (2021) to 317.4 billion sticks (2024), which is partly influenced by excise and pricing policies (Ilham & Irawan, 2024).

Based on the results of a literature review, the increase in cigarette prices due to higher excise taxes has been shown to encourage changes in consumer behavior. These changes are generally not in the form of

people quitting smoking altogether, but rather in the form of a reduction in the number of cigarettes consumed per day or a switch to cheaper brands and types of cigarettes. This phenomenon shows that excise policies have a behavioral effect, although they are not yet fully optimal in reducing the prevalence of smoking.

Consumption Response Based on Income Level

The results of the literature synthesis show that low-income groups respond more significantly to increases in cigarette prices. Limited purchasing power causes cigarette price increases to become a factor that suppresses consumption, so this group tends to reduce the intensity of smoking or switch to cigarettes of lower quality and price. This is in line with the concept of demand elasticity, where the demand for cigarettes among low-income groups is relatively more elastic to price changes.

Conversely, upper-middle-income groups tend to have lower demand elasticity. In this group, cigarette consumption remains relatively unchanged despite price increases, as cigarettes have become part of a lifestyle and addictive habit. This condition reinforces the finding that cigarette excise policies tend to be more effective in reducing consumption among economically vulnerable groups, but have less impact on groups with greater financial means.

Changes in cigarette consumption behavior appear to be influenced by price elasticity. In many countries, increases in cigarette prices through fiscal policy significantly reduce consumption among low-income groups, but the effect is smaller among higher-income groups.

Recent international research shows that tobacco excise policies have a significant but variable impact on consumption behavior. A study conducted by Shrestha (2025) in *Empirical Economics* using the difference-in-differences method on Behavioral Risk Factor Surveillance System (BRFSS) data in the United States found that an increase in tobacco excise taxes significantly reduced cigarette consumption. However, the magnitude of this impact differs among groups of smokers, reflecting heterogeneity in response based on socioeconomic characteristics and level of dependence on cigarettes. These findings confirm that the effectiveness of excise tax policies is greatly influenced by variations in smoker behavior within the population (Shrestha, 2025).

In line with these findings, the results of the ITC Vietnam Survey (2024) published in *BMC Public Health* show that the increase in cigarette prices due to higher excise taxes is closely related to an increase in the intention to quit smoking and attempts to quit smoking among adult male smokers in Vietnam. This study indicates that higher cigarette prices not only lead to a decline in consumption but also act as a trigger for behavioral change toward smoking cessation, particularly in developing countries with cigarette market characteristics similar to those in Indonesia (Phuong et al., 2024).

Meanwhile, the study *Stability of Price Elasticity in Mexico* (2025) published in *Tobacco Induced Diseases* using the Deaton model found that the elasticity of cigarette demand was relatively stable despite major tax reforms. These results indicate that the demand response to price increases is not linear and is greatly influenced by the local economic context, consumption patterns, and the availability of cheaper cigarette alternatives. These findings reinforce the argument that cigarette excise policies have complex effects and require a comprehensive approach to achieve consumption control objectives.

At the national level, quantitative research conducted in Telanaipura District, Jambi (2025) shows a significant relationship between plans to increase cigarette excise taxes and reduced consumption among active smokers. The results of this study reveal that 79% of respondents stated their willingness to reduce cigarette consumption if prices increased, indicating that smokers at the local level are quite responsive to pricing policies, especially among groups with limited purchasing power (Wardiah Rizalia, Hidayati Fajrina, 2023).

In addition, a study analyzing cigarette prices in Semarang City (2024) published in *Yurisprudentia: Jurnal Hukum Ekonomi* concluded that cigarette prices and income levels have a significant effect on cigarette consumption. However, this study also found that cigarette consumption trends continued to increase during the 2016–2021 period, indicating that price increases have not been fully effective in reducing aggregate consumption. These findings emphasize the need for cigarette excise policies that are integrated with other control instruments in order to optimize their impact on consumption behavior (Prasetya Rzki Irfan, 2024).

Policy Implications

These findings indicate that cigarette excise policies have a significant impact on public consumption behavior, especially among low-income groups. However, their effectiveness is still limited and has not been able to reduce cigarette consumption across the board. Therefore, cigarette excise policies need to be integrated with other supporting policies, such as ongoing health education, restrictions on cigarette advertising and promotion, monitoring the distribution of cheap cigarettes, and special protection for children and adolescents. The integration of these policies is expected to strengthen the role of cigarette excise as an instrument for controlling consumption and improving the health of the population nationwide.

CONCLUSION

Based on the results of the discussion, it can be concluded that cigarette excise tax affects cigarette consumption behavior in Indonesia. An increase in excise tax, which leads to higher cigarette prices, tends to reduce consumption levels, particularly among low-income groups and light smokers. However, this impact is relatively limited among high-income groups. Therefore, cigarette excise tax policies need to be accompanied by supporting policies so that the effectiveness of cigarette consumption control can be more evenly distributed across all levels of society.

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